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Men Without Machines

The frontispiece shows a Tahitian outrigger canoe caught in a storm.



COTTIE BURLAND

Men Without Machines

The Story of Primitive Peoples

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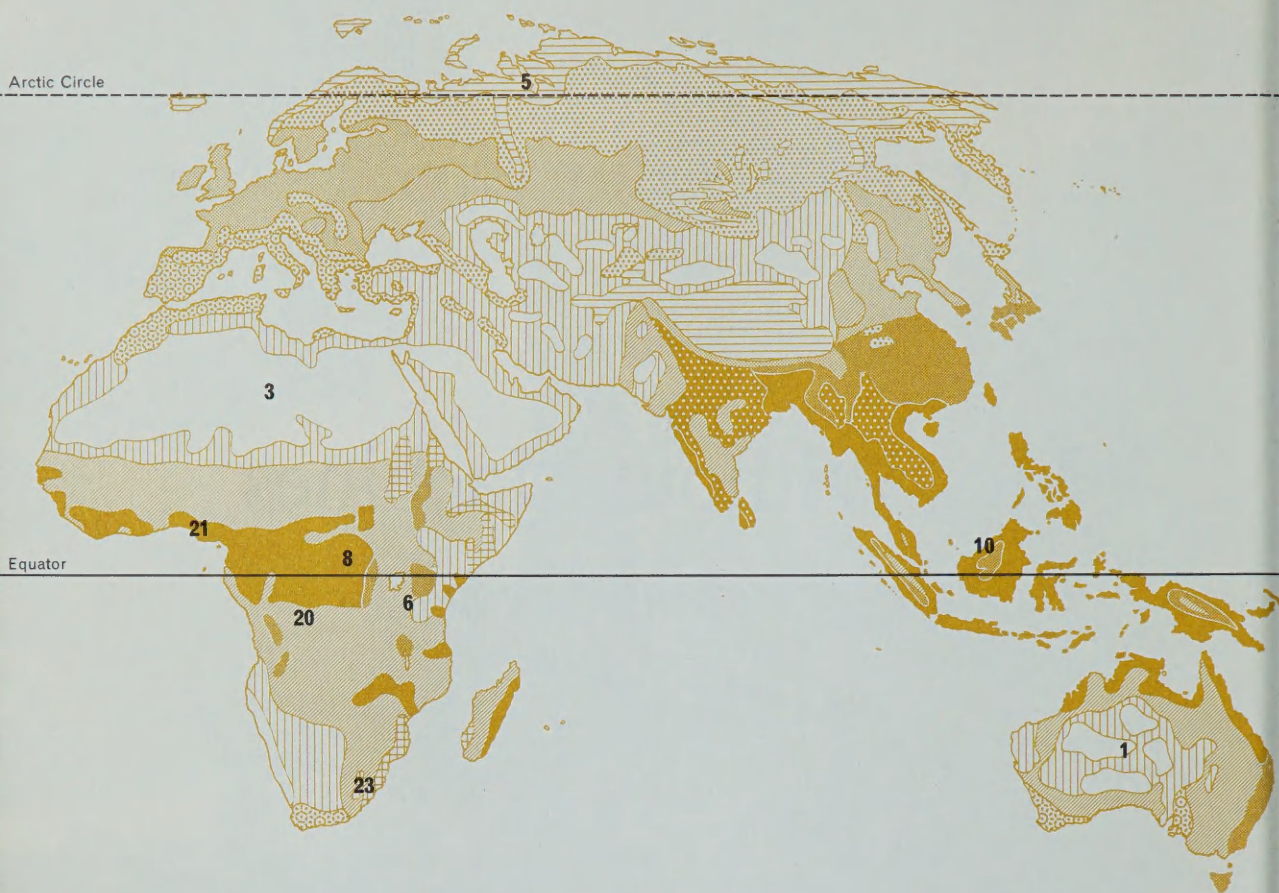
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Location of Tribes



1
Arunta
page 18



2
Hopi
page 31



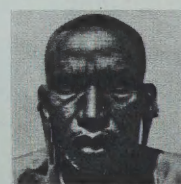
3
Tuareg
page 43



4
Tehuelches
page 46



5
Samoyeds
page 53



6
Masai
page 61



13
Tahitians
page 133



14
Easter Islanders
page 145



15
Maoris
page 153



16
Yamanas
page 160

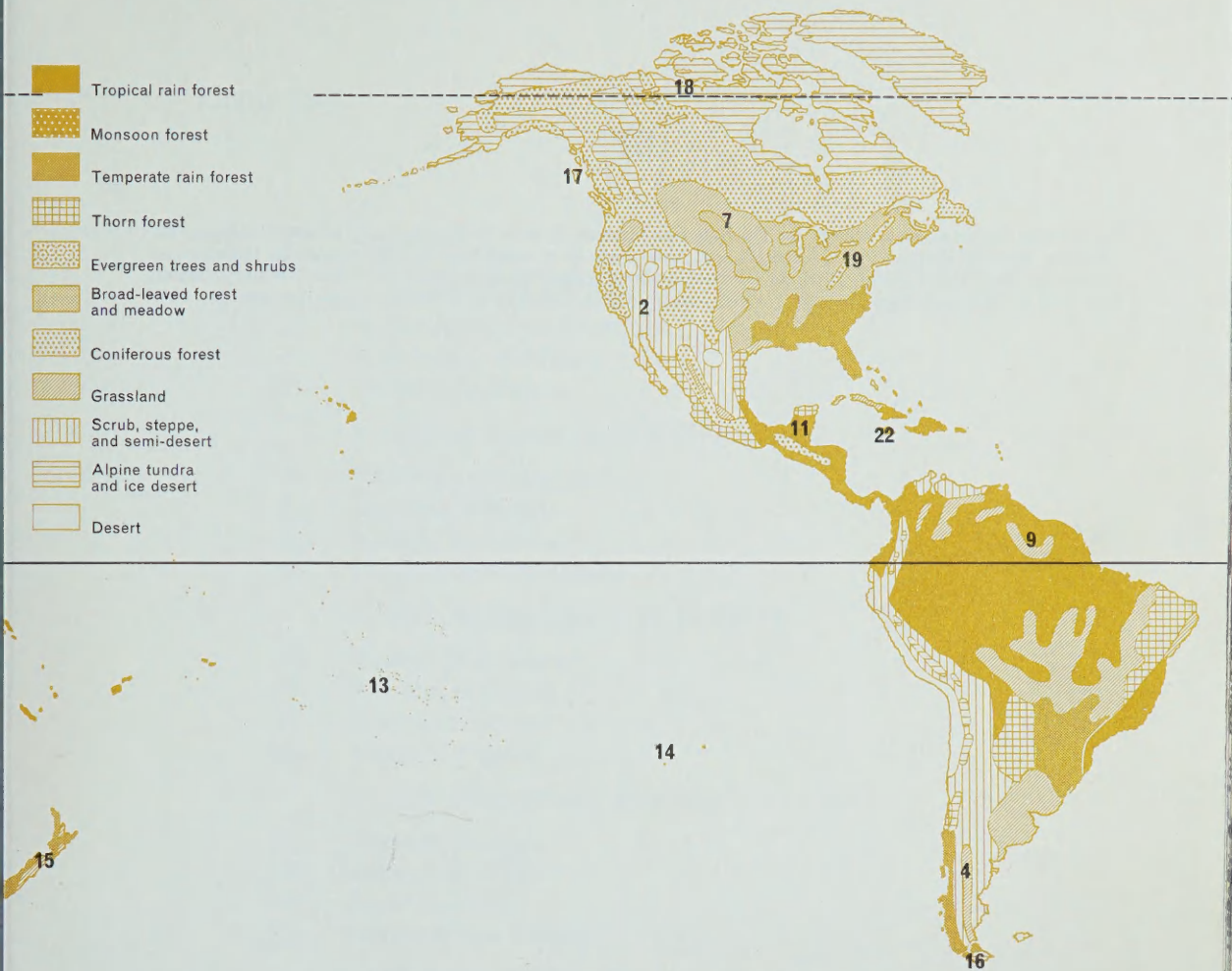


17
Haidas
page 167



18
Copper Eskimos
page 177

Curriculum



Mandans
page 67



8
Bambuti
page 80



9
Wai-Wais
page 87



10
Kenyahs
page 97



11
Mayas
page 109



12
Solomon Islanders
page 122



19
roquois
page 188



20
Bushongo
page 199



21
Bini
page 209



22
Maroons
page 220



23
Zulus
page 229



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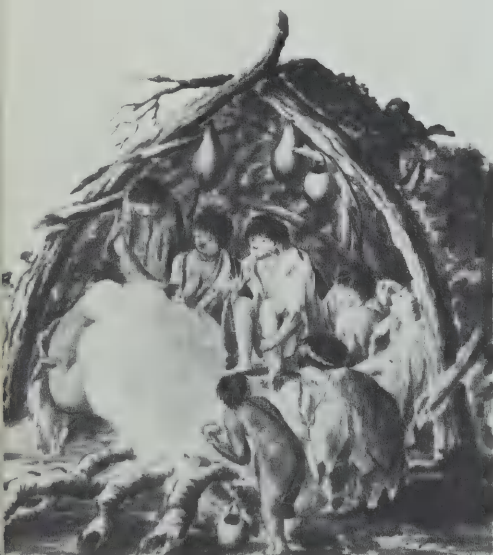
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Contents

page	12	Introduction
		1 LIFE IN THE DESERTS
	<u>18</u>	Arunta Aborigines of Australia
	31	Hopi Indians of Arizona
	43	Tuareg of the Sahara
		2 LIFE IN GRASSLAND AND TUNDRA
	46	Tehuelches of Patagonia
	53	Samoyeds of Siberia
	<u>61</u>	Masai of East Africa
	67	Mandans of North Dakota
		3 LIFE IN THE TROPICAL FORESTS
	<u>80</u>	Bambuti of the Congo
	87	Wai-Wais of Guiana
	97	Kenyahs of Borneo
	109	Mayas of Yucatán
		4 LIFE ON OCEANIC ISLANDS
	122	Solomon Islanders
	133	Polynesians of Tahiti
	145	Easter Islanders
	<u>153</u>	Maoris of New Zealand
		5 LIFE ON THE COASTS
	160	Yamanas of Tierra del Fuego
	167	Haidas of British Columbia
	<u>177</u>	Copper Eskimos
		6 LIFE IN THE OPEN WOODLANDS
	188	Iroquois of New York State
	199	Bushongo of the Congo
	209	Bini of Nigeria
		7 CULTURE CONFLICTS IN A CHANGING WORLD
	220	Maroons of Jamaica
	<u>229</u>	Zulus of South Africa
	242	8 TRIBAL CULTURES AND MODERN LIFE
	247	Index
	251	Credits



The Tehuelche hunters of Patagonia (above) had no permanent dwellings. They pitched their portable skin tents wherever they found herds of game. Below: The Yamanas of Tierra del Fuego, who lived by fishing, left the framework of their huts behind when they moved to a new area.



Introduction

"The proper study of mankind is man." There was nothing new about this thought when the English poet Alexander Pope wrote it more than two centuries ago. Man has probably been absorbed in the study of himself, his neighbors, and human society ever since he was man. His interest has constantly expressed itself in legends, histories, biographies, art, and other forms. Since the time of Pope, however, the study of man has become far more systematized than ever before. As a result, many new scientific disciplines, such as psychology, sociology, political science, anthropology, and ethnology, have developed. The last two, which overlap, are especially concerned with the study of peoples who live in remote areas of the earth and who have developed their own way of life cut off from the main streams of civilization.

The fascination of such studies is obvious. They take us away from the familiar life of twentieth-century towns and cities into worlds that, although real, are stranger than those of science fiction. In these strange worlds the labor-saving apartment of the modern city dweller gives place to the communal longhouse of the Kenyahs, the Yamanas' hut of twigs and bark, or the Arunta's "shelter" under the open canopy of the heavens. Earning a living ceases to mean working in a factory or an office. It becomes the Wai-Wais' hunt for game with poisoned arrows, or the Mandans' hazardous effort to pick off a few bison from the herds sweeping across the prairie, or the Eskimos' patient wait by a breathing-hole in the sea ice.

Travel is not by plane, liner, and car, but by sledge, dug-out canoe, or skin kayak. Being properly dressed may involve wearing heavy ear discs that hang to the shoulders, or a sliver of bone through the septum of the nose, or a single feather in the hair—or nothing at all. Preparing food may begin with squeezing deadly poison out of manioc or searching for a few grubs in a waste of desert. Codes of conduct may permit head-hunting and cannibalism but forbid the



The longhouse of the Kenyahs of Borneo is a permanent structure. It is used for fifteen to twenty years, until the land around has been exhausted by the demands of rice cultivation.

Maori houses are grouped in fenced, permanent villages that are never abandoned. Thus the builder has an opportunity to add elaborate embellishments to the external walls and doorway.

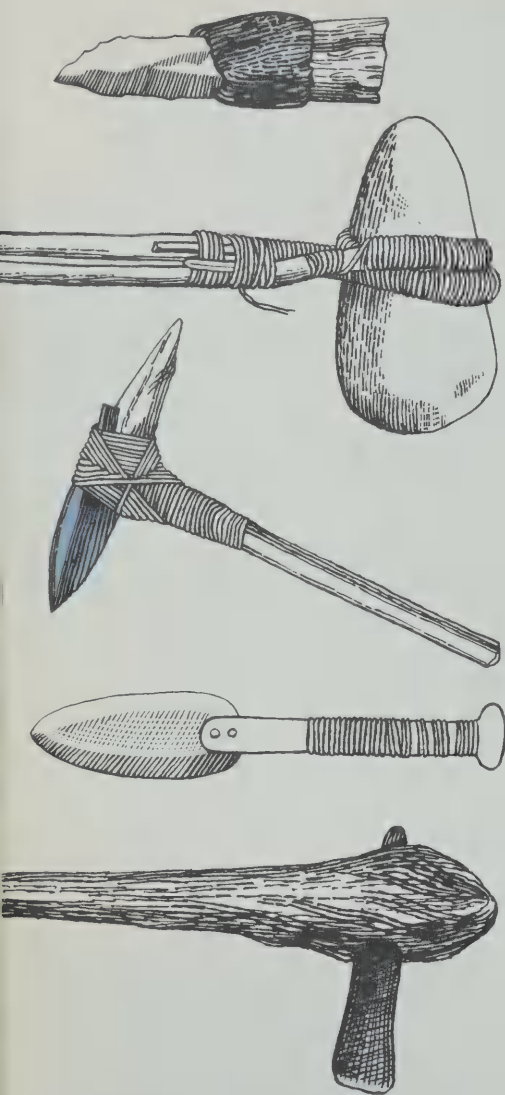
killing of an insect or a reptile. Tools may be few and techniques simple, while gods are many and rituals complex.

Yet the study of primitive peoples offers far more than the mere enjoyment of what is strange, colorful, and bizarre. It offers the opportunity to look at man in a new light—a light undimmed by overfamiliarity—and to pinpoint what it is that marks him as unique among living things.

All living things must live in an environment and adapt themselves to it. Plants and animals do so by evolving—over an immense number of generations—the physical characteristics that the environment demands. Those that fail to adapt eventually die out. Yet no matter how well an animal may be adapted to one environment, it can seldom readapt itself to another. It is passing the death sentence to set a polar bear free in the Sahara or a camel in the Arctic. Man, on the other hand, has spread over the whole surface of the globe, making comparatively few physical adaptations to new environments in the process. (Racial differences, such as varying skin color, hair form, and shape of eyelid, are small compared with the basic physical similarities that exist among all men.)

Man's adjustment to nature, in fact, is not through physical adaptation but through "culture." Culture can be broadly defined as the artificial environment of tools, techniques, and social organization that men use to exploit and modify their natural surroundings. Starting alone in entirely natural surroundings, no man could build up a culture in his own lifetime. There would be far too much to discover, far too many skills to devise and perfect. He would need the help of other men and women with whom he could interchange ideas, share experiences, and cooperate in working. Even then the group would probably not get very far. Real progress begins only when the experience gained by the





Tools representing different stages of man's technological progress are shown in these examples from cultures discovered by European explorers. From top to bottom: A chipped flint knife from the Arunta of Australia; a polished stone ax and adz, both Polynesian; a knife of beaten copper from the Eskimos; and an iron ax from the Zulu.

group's trials and errors can be passed on to its children, so that the new generation does not need to start from scratch. This progress will be greatly accelerated if the new generation is given the opportunity to meet strangers, borrow ideas, and trade goods and materials.

In this situation, it would be unreasonable to say that the original members of the group were less intelligent than their children. But it would be perfectly fair to say that they had a more primitive material culture. It is in this sense only that the word "primitive" is applied to the tribes we shall meet in this book. Although they were doubtless just as intelligent as ourselves, nearly all of them were cut off from contact with people who employed tools and techniques very different from their own. As a result, their material cultures were slow to develop. We find among them an almost total lack of wheels, very little use of non-muscle power, no large-scale use of metals, and only the very simplest of mechanical devices. In fact, the one characteristic they all had in common was that they were men without machines.

This does not mean that when people of European stock first met them all these primitive people were at the same level of technological development. Some, like the Arunta of Australia, were using only the chipped flint tools characteristic of the Paleolithic Age. Others, like the Polynesians, had the more efficient polished stone tools typical of the Neolithic Age. Still others had gained some knowledge of metal working, from the simple shaping of locally collected copper among the Copper Eskimos to the refined tempering of steel practiced by the Kenyahs of Borneo.

It is easy enough to define various "levels" of progress so long as we are considering only the technological aspects of cultures. When we take customs and beliefs into account, it is impossible to do so. Every society must build up its own rules defining the rights and obligations of all its members, so that they can cooperate in the business of living together in a common environment. If the society is to hold together, its members must accept those rules as being just and "right." As time goes on, the society usually develops many customs, rituals, and religious beliefs that combine to reinforce this idea of the rightness of its rules. From then on, there is a natural tendency to imagine that the different rules and customs of any other society must be wrong or even wicked.

We ourselves are not free from this tendency. Our own moral judgments, our own habits, our own sense of values,



Dancing is found in many situations. Above: Hopi Indians of Arizona perform a snake dance, one of the rituals in their religious calendar of events. Below: A Kenyah warrior performs a war dance, which in former times preceded head-collecting raids.

are largely the product of the culture in which we have grown up. Yet we often come to regard them as if they were “naturally” right, and we are apt to judge how “advanced” the customs and values of other peoples are by how close they are to our own. Judgments made in this way are less likely to lead to understanding than to misunderstanding.

It is far more profitable to ask, “Did these customs and values contribute to the general well-being of the people who held them?” We may then come to the conclusion that there are many “right” sets of values, and that few can claim superiority over the others. For a people like the Hopi, whose living depended on the difficult feat of raising crops in the desert, it was right to place a high value on the human qualities of cooperation and self-forgetfulness. For warfaring peoples, such as the Iroquois and the Masai, it was equally right to value courage and aggressiveness.





For the Eskimos, often living in small isolated hunting groups, it was again equally right to value hardiness and self-reliance.

So it is that in studying the ways of primitive peoples we may find ourselves gaining in tolerance. We may also find that the pride we take in the achievements of our own civilization can be extended to cover the achievements of humanity at large, including those of peoples whose technology remained backward. The great cities and step-pyramid temples that the Stone-Age Mayas raised in the forests of Middle America are as remarkable as any of the wonders of the classical world. The form of government evolved by the Iroquois of North America was more sophisticated than many forms of government utilized in medieval Europe. The incredible voyages of the Polynesians across the wastes of the Pacific compare in daring with modern man's first flights into space. And the artistic standard and skill of the bronze-casters of Benin, in West Africa, have seldom been surpassed anywhere in the world.

In this book we shall visit various primitive peoples at a time when their way of life had not yet changed much as a result of their contacts with white men. The first contacts were nearly always established by explorers or traders, and their reports, drawings, and paintings are an invaluable source of information. So, too, are the souvenirs they brought home with them, many of which have now found their way into museums. But more often than not these early travelers could do little more than describe the clothes, homes, tools, and weapons of the tribes they met. With no

Above: An early explorer in the South Pacific makes contact with the islanders. Reports by early adventures provide one of our best sources of information concerning the lives of such peoples before white contact.

Explorers such as George Catlin, who lived and traveled with the North American Indians, have left us an invaluable visual record of the ways of life of peoples who no longer exist. Below: Catlin shows himself painting a Mandan chief.





Totem poles of the Haidas of British Columbia express complex ideas. The anthropologist Franz Boas, who spoke Haida, obtained two different versions of the meaning of this one.

knowledge of the tribal language, they were unable to discover anything about a tribe's history and traditions, anxieties and aspirations, religion and social organization. To learn about these things demanded later investigations by skilled anthropologists.

Their task was a formidable one. The first difficulty arose from the fact that few primitive peoples ever discovered a way of keeping permanent records. In this book we shall meet with only three examples: the written symbols of the Mayas, which have only recently been deciphered; the *rongo-rongo* writing of the Easter Islanders, which defied decipherment until a few years ago; and the Wampum bead patterns of the Iroquois, which were little more than "memory-joggers" for the people who made them.

This meant that the anthropologist had to begin work by learning the language of the people he intended to study, so that he could mix with them and learn about them at firsthand. Often he lived among them for years, gradually getting to understand their problems and ways of thought. Then, by patiently questioning the older members of the tribe about the events of their early lives and about the stories they had heard from their parents and grandparents, the anthropologist was able to build up a reliable picture of the traditional tribal way of life. By observing funeral rites and other religious ceremonies he could discover the nature of their spiritual beliefs. In times of war he could study their military organization. When a marriage took place, he could inquire about incest regulations, bridewealth, and other aspects of the kinship system—that is, all relationships based on blood or marriage.

Many tribes that maintained their own unique ways of life until only a few decades ago have now *assimilated* some of the techniques and beliefs of modern Western Civilization. To that extent, they have lost their individuality. The notes and observations of early traders and explorers, coupled with later investigations of anthropologists, enable us to step back in time. There we see not just a great many simple cultures, but a diversity of cultures. The essential purpose of this book is to describe those cultures, not to classify them, analyze them, or interpret them. Yet certain broad conclusions will inevitably emerge—notably, that man's unique ability to come to terms with his environment by means of culture can express itself in many ways. There is no single highway but a wide variety of paths that lead to purposeful and harmonious living. Perhaps in trying to understand how primitive peoples explored these paths, we can become better acquainted with ourselves.



A painting of the 1790s shows a newly arrived party of Englishmen curiously examining some coastal aborigines in the region of Botany Bay, Australia. After the arrival of English settlers in the late eighteenth century, the aborigines were pushed steadily farther into the interior. The modern aerial photograph (below) shows the central Australian desert, homeland of the Arunta people.



1 LIFE IN THE DESERTS

Arunta Aborigines of Australia

People cannot live in a total desert where nothing at all will grow and where no water can be found. But in many parts of the world are regions of semidesert. In these regions the occasional presence of water, together with sparse vegetation and some animal life, have enabled human populations to wrest a living from the land.

One such region is the central Australian desert, a very large area surrounding the Macdonnell Ranges. Much of this region is an arid wilderness, featureless for mile upon mile except for occasional dunes of sand or gravel and the remains of dried-up river beds. In some areas the desert gives way to scrubland that supports the spiky spinifex plant, the dwarf acacia known as mulga, and other hardy plants. Even here the average annual rainfall is less than ten inches and there are few wild animals.

For perhaps ten or fifteen thousand years this region has been the homeland of Australian aborigines, a wavy-haired, chocolate-colored people with one of the most primitive material cultures in the world. The aborigines came to this "evolutionary backwater" from southeast Asia, as did many species of Australian animal life. It may well be that the Australian wild dog, or dingo, came with them.

If one judges a people's civilization by their ability to dominate the environment, the aborigines were totally uncivilized. Their lives were devoted to an almost ceaseless struggle to find food. They never evolved any agricultural techniques, and there were no animal species that they could domesticate. They needed no houses since they never stopped for long in any one place. They developed few tools except simple wooden or stone implements.

Yet, although they could not control nature, they were highly adapted to their harsh environment. Their hunting skill, based upon traditional knowledge, was probably unmatched anywhere in the world. Every spoor, or animal track, in the dust would be examined and used in the search for food. Even insects provided nourishment. Tribesmen could find water in areas where the most experienced Euro-



This portrait was painted by an unknown artist who visited Australia in the 1790s with a fleet of convict transports. It shows a native of the Port Jackson area, near Sydney.



The main aborigine reserves (shown in red) in Australia today. There are also several smaller communities in Queensland, in Western Australia, and in New South Wales.

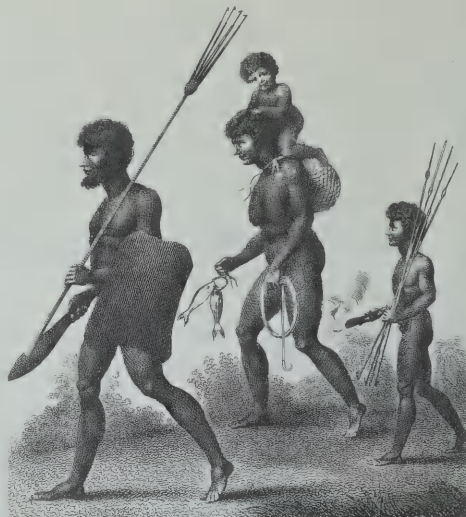
pean “bushman” would die of thirst. Physiologically, too, they were well adapted to their life. During the cold desert nights the blood circulation near their skin’s surface slowed down, thus reducing the amount of heat lost to the surrounding air.

The desert could support only a widely scattered population of hunters. Each tribe of aborigines therefore had hunting rights in a particular area that had been defined, according to tradition, by ancestral spirits. The boundaries of such areas were rarely disputed by neighboring tribes, even in times of famine. Yet even this was not enough to ensure that no part of the desert would be overexploited. Within each area the tribes were split into small family groups that might come together only on ceremonial occasions.

In many areas of the Australian interior the aborigines’ way of life continued unchanged until the late nineteenth century. Perhaps the best known of all the tribes was the Arunta, who lived near the site of the present town of Alice Springs. The Arunta’s culture was studied in detail during the 1880s and we can reconstruct it here.

1 / Life on a Walkabout

On a small Arunta family’s *walkabout*, as their continual movement through the day is known, the father would lead the way. Like the rest of his family he wore no clothes, and the deep chocolate color of his skin was darkened by dust and dirt. His long wavy hair was usually bound with twine into a bunch at the back of his head. Through a hole in the septum of his nose he wore a slender bone ornament. Around his waist he wore a belt, made of hair twisted into a thin rope, in which he carried throwing clubs and a boomer-



An engraving done in 1793 shows a coastal aborigine family on the move. The father leads the way, followed by his wife and child. The aborigines carry little other than bare necessities such as fishing tackle, weapons, and simple domestic items. The boy carries a burning stick to start the next fire.

This landscape drawing of 1828 shows a wilderness of rock and scrub with the Blue Mountains of New South Wales on the horizon. This wild land of gully and steep-sided ravines presented a formidable obstacle to exploration.





ang. In his hands he held a stone-tipped spear, a spear thrower (see illus. p. 23), and sometimes a shield. These were his most valued possessions, weighing perhaps twenty pounds. If he had a teenage son, the youth would walk beside him on their travels. Younger children walked a few paces behind. The mother brought up the rear. Her hair was often short, for she cut it to make into ropes like that around her husband's waist. On her head she carried a *pitchi*, a long, shallow, wooden dish, which might contain some stone knives, animal skins, and a lizard or two for supper. In her hand was a digging stick. Such family groups were often accompanied by a dingo.

In their constant, dawn-to-dusk walkabouts, the aborigines rarely followed a trail. They relied upon their unerring

Although they normally lived in scattered groups, the aborigines came together on special occasions. This large party was attracted by the British expedition led by Mitchell along the banks of the Murray River in the year 1836.





Aborigines make fire by rubbing a spear thrower against a piece of bark. Enough heat is created to kindle a few blades of dry grass.

With a crude stone ax, an aborigine chips away the bark of a eucalyptus tree. This might be used to make a *pitchi*, or shallow wooden dish.

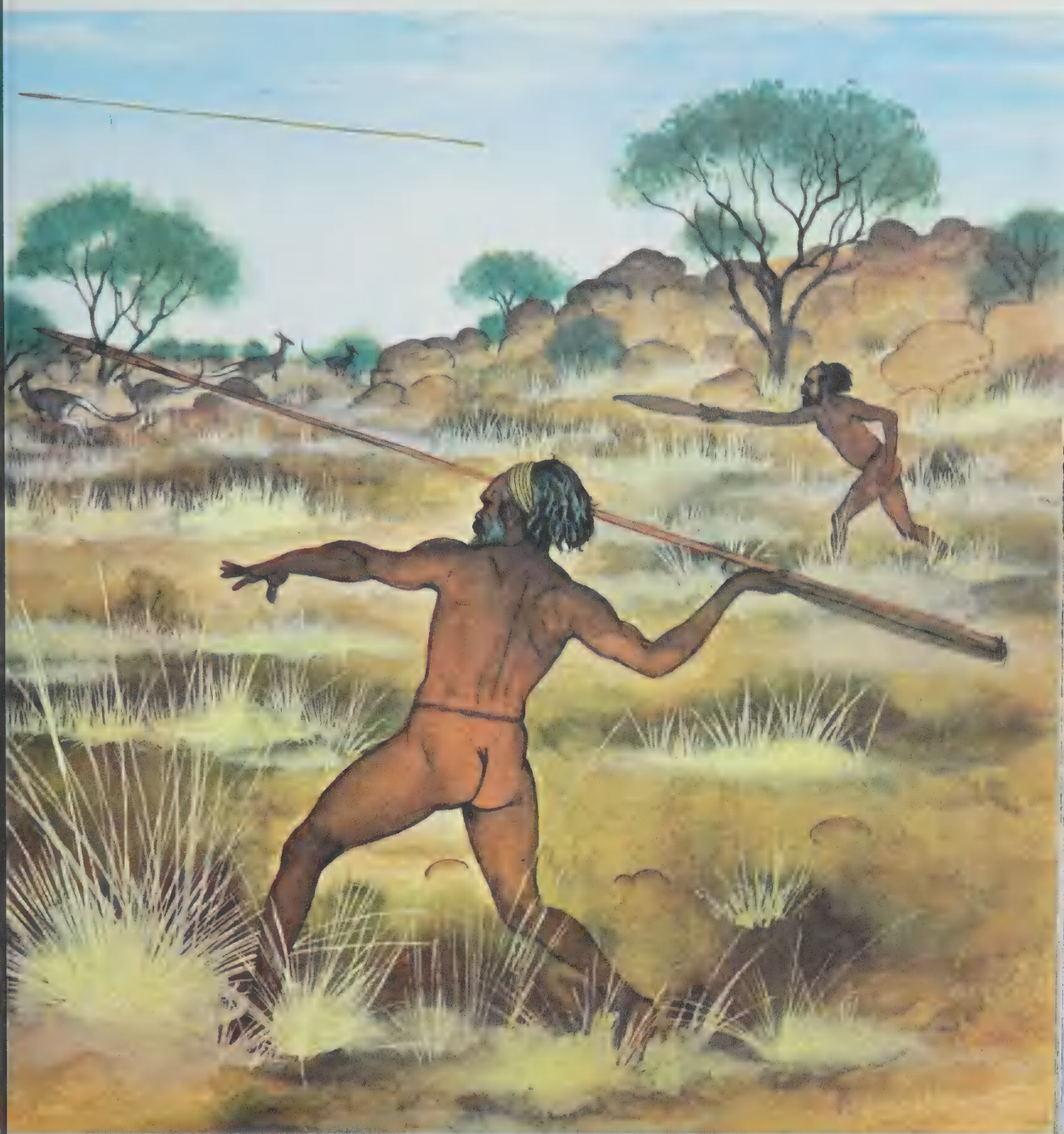


memory for even minor geographical details to guide them from one area to another. When they sighted game, the father would signal to the others to sit down and wait. Then, keeping downwind, he slowly and silently advanced upon the animal. A hunter often adopted as a disguise the same kind of movements as the animal he was stalking. If he were after wallabies (a kind of kangaroo) he would use a hopping movement, stopping now and then as if feeding on patches of coarse grass. Stalking needed limitless patience as well as cunning. There was rarely any cover for the hunter, and in the quiet desert the smallest sound might carry for hundreds of yards. When he was within range—about twenty yards—the hunter would slowly move one hand behind his back to catch the hook of his spearthrower on to the end of a spear. Suddenly, he would leap and “launch” the spear. The hunter knew the behavior of desert animals so well that he could calculate exactly which way and how far his prey would jump when the spear was thrown.

Before the animal was eaten, each member of the family had various tasks to carry out. While the father prepared the animal, the eldest son would dig a pit for the fire. The younger children collected dry wood and grass for fuel. The mother sought water with her digging stick. If she was lucky enough to find some, she gathered it into her *pitchi*.

Most aborigines made fire by rubbing a piece of wood in a sawlike movement against a dry stick or a sliver of bark. When the friction of this movement had created enough heat, dried grass was placed on the dry piece and blown on gently until a flame was kindled. When the fire was well established in the pit, the animal was rolled in and left until more or less cooked. Then the father tore it to pieces with the aid of a stone knife. Killing a kangaroo or an emu (a large ostrichlike bird) or other large animal was a rare occurrence, especially in the hard winter months. On such occasions the family ate as much as it possibly could, for it might be days or weeks before it had so substantial a meal again.

For most of the year families rarely bothered to make shelters to sleep in. At nightfall they simply lay down, their feet close to the campfire embers, and slept soundly until dawn. During the two coldest winter months, however, they might build a crude windbreak by piling brushwood against a couple of poles stuck into the ground. These two months are also the driest, and at this time the aborigines might be deprived even of a bare subsistence, and experience real famine, possibly ending in death.

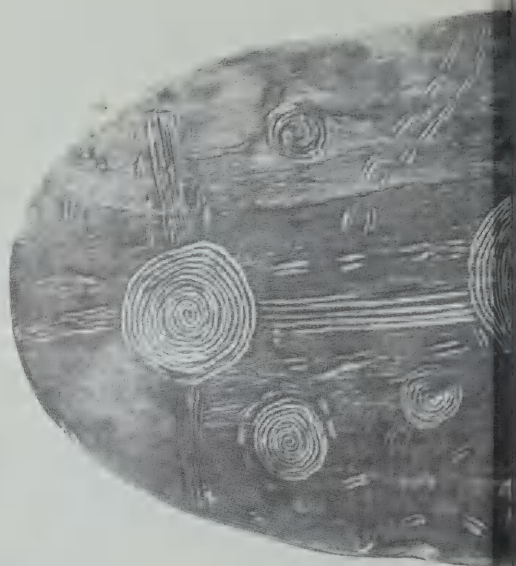


Two hunters close in for the kill. Both use the spear thrower, which extends the length of the arm, giving the spear greater thrust. Hunters often worked together, some lying in wait while others drove the game toward them.

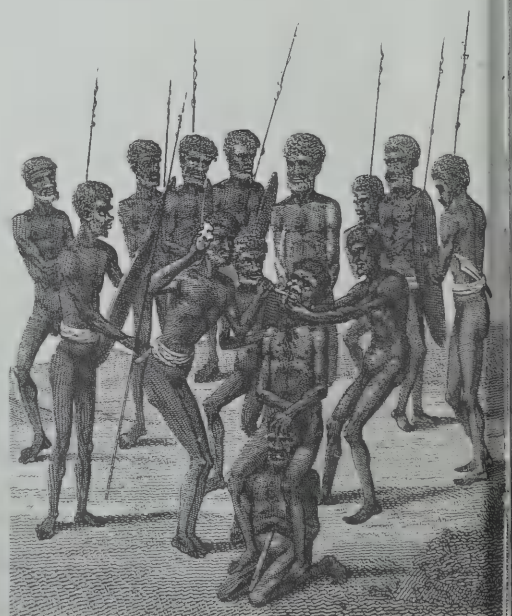
When a person died, there was much crying and wailing. Members of the family cut off their hair. The women slashed themselves with stone knives and painted their bodies with pipe clay. Whatever shelter the group might have was abandoned. Often the corpse was dried in the sun, then wrapped in sheets of bark and carried by the family until the next gathering of the tribe.

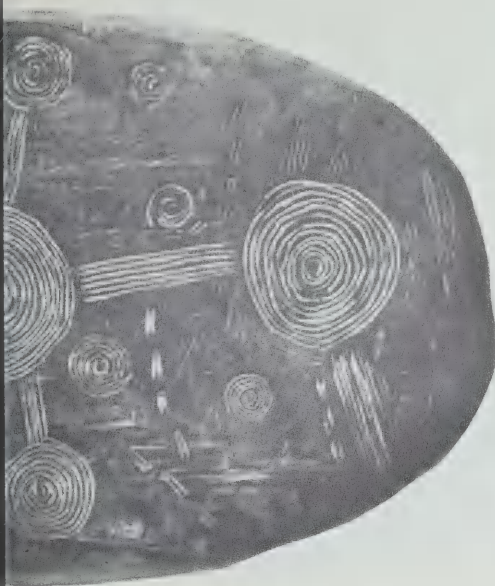
Tribal Myths

The everyday life of the aborigines was simple and harsh, but the tribal gathering emphasized the fact that their social and spiritual culture was complex. According to their mythology, the first ancestors of each tribe had come up out of the earth in the *alchera*, or long-ago time, when men and animals and plants were nothing more than spirit beings. The ancestral spirits had then journeyed around the tribal lands. Here they had made a hill, there an animal. Some had made trees, others had caused water to spring and flow into pools. At the place that marked the end of his journey, the spirit responsible for that particular creation had gone underground. Near each such place the tribes had a secret cache, containing *churinga*—magic rounded stones or wooden blocks in which the spirit had left the souls of their ancestors. From these ancestors came all the people as well as all the animals and plants. Thus the place where the kangaroo spirit had gone underground became a sacred



Aborigines believed the *churinga*, objects carved from stone or wood, contained the souls of human or animal ancestors of their tribe. The stone *churinga* (above), for example, was thought to be inhabited by the spirits of a group of grasshoppers. Their story is symbolized by the marks inscribed on it.





Aborigine initiation ceremonies as recorded in three engravings dated 1798. Below left: A half circle of men, watched by the young initiates, perform a ceremony of rhythmic spear thrusts. Center: The initiate has a front tooth knocked out. Right: The ceremony over, the boys rest on a log—except for one sufferer, whose gum is rubbed with a fish.

spot for the kangaroo *totem*—that is, the animal spirit that certain people might identify with. The place where the emu spirit had gone underground became a sacred spot for the emu totem, and so on.

The birth of an aborigine child signified the rebirth of one of these ancestral spirits. At the moment a woman first realized she was pregnant, therefore, she took note of the totems in her immediate neighborhood. At the next tribal gathering, the elders determined which of these ancestral spirits would be reborn in the infant. The *churinga* associated with that spirit would then be taken out of a secret store. When the child had grown up, lived its life, and finally died, the elders knew that its soul had returned again to the *churinga*. The stone or block was once again hidden in a secret place so that the soul could await rebirth in a future child.

Every person in each tribe thus had two distinct, although often overlapping, sets of relatives. There were those related to him by blood, and those related to him through his particular ancestral spirit. His social behavior toward each was defined to the last detail by tribal customs. These customs also regulated marriage, according to the various ties of kinship. "Kinship" was so wide a concept that every tribesman or woman was related to everyone else in the whole tribe, and not merely to the group of relations with whom he or she lived and hunted.



Initiation Ceremonies

Knowledge of the ancestors, and of the myths and magic that were a central feature of tribal lore, was embodied in songs and chants. These were known only to the elders and fully initiated male adults. Each male participated in a series of initiation ceremonies that began in his early teens and might continue until his mid-twenties. Every initiate had to endure ritual tortures that got progressively more severe with each ceremony. They included cuts on the body, circumcision, and firewalking. It was unthinkable to shirk these ceremonies. Unless he underwent them, a boy could never be received into adult membership of his tribe. After each stage of initiation, the youth would learn from the elders a little more of the tribal secrets.

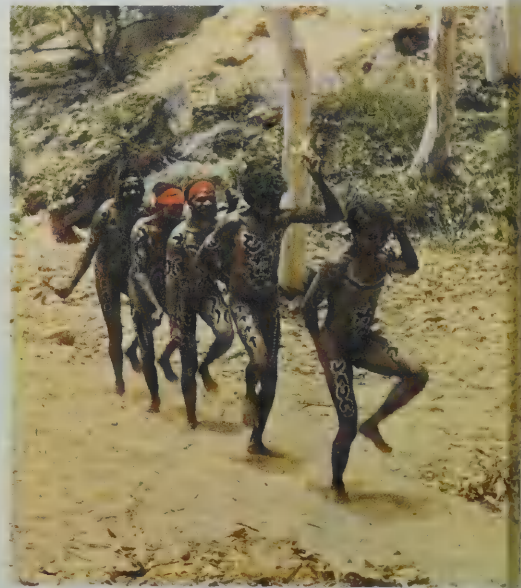
Before his first initiation a boy would be summoned by an elder, who gave him a short stick with lines carved on it. The boy was told to prepare himself to be called by the voice of the spirits. There was no need to be afraid, because his magic stick would protect him, but he must do exactly as the spirits commanded. When he awoke next morning the boy would hear what he believed to be the voice of the spirits, coming from behind rocks near the camp. Then a group of painted and feathered figures would spring from behind the rocks, throw the boy and his fellow initiates to the ground, and dance upon their bodies. These "spirits" would then disappear behind the rocks again, to be replaced by two elders carrying flat, oval-shaped pieces of wood attached to lengths of string. When the elders whirled these objects around their heads, they made the noise that the initiates had thought to be the voice of the spirits. This was an important secret, and the boys would be solemnly warned never to mention these *bull-roarers* (see illus. p. 27) before the women or children.

Then other elders would appear in order to test the bravery of the boys. One by one, the initiates were laid on the ground, deep cuts made in their arms, and charcoal rubbed into the wounds. If they could withstand the pain without crying out, they had taken their first step toward manhood. A boy was very proud of the raised scars on his arms, for they were visible proof of his new standing in the tribe.

At big tribal gatherings the elders would organize a *corroboree*, a kind of acting dance, in honor of the ancestors. They spent many hours painting their bodies and making elaborate headdresses for the actors. Then, as the main body of men sat chanting in two parallel rows, the actors would come between them, acting out in mime the life story



At his first initiation ceremony, a young Arunta boy is tossed in the air by tribal elders. Tests of courage and the ability to withstand pain earned each boy his right to share in secret tribal knowledge.



Dancers at a *corroboree* honoring the tribal ancestors. The men spend many hours painting their bodies although the dance may be over in a few minutes.



Initiation ceremonies continue long into manhood. Above: Two mature men lie on a fire covered with green branches watched by tribal elders. Right: A bull-roarer, used by the men to make the sound of spirit voices.



Early engraving (1798) of a dance symbolizing a kangaroo hunt. Men with spears "hunt" the dancers, who wear tails and make hopping movements.



of the totem animal that the dance was celebrating. Dances of this kind helped to strengthen the individual's sense of identification with the tribe and its mythology. And by honoring, say, the ancestral emu, the dances were also intended to encourage all emus in the tribal lands to breed, thus providing good hunting in the future.

These gatherings could never continue for more than a day or two, since large concentrations of people in any one place quickly stripped the land bare of plant and animal life. The gatherings usually ended with a party at which the people danced all night and finished the last scraps of food. In the morning the small family groups would go their separate ways.

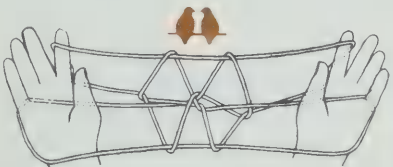
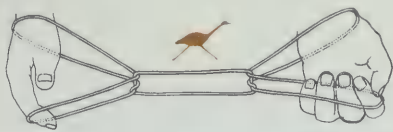
Crafts and Recreations

While resting on their wanderings the older men in a family collected stones for shaping into spear points—a lengthy job needing patience and ancestral “know-how” available only to initiated adults. First, a stone was chipped to roughly the right shape. Then the edges were shaped by striking narrow pieces from them with a pointed stone hammer. Finally a piece of bone was used to press off small slivers of stone from both sides until the edge was wavy in outline and razor-sharp. The finished point was stuck to the end of a wooden spear with gum from the spinifex plant. When the spear was ready for use, the elders sang magic songs to give it success in hunting.

Boys learned the rudiments of spear throwing by practicing with a throwing stick that had a weighted head and a long slender tail. But they were not allowed to kill game until they had learned some of the secrets of hunting at initiation ceremonies. Girls learned at an early age how to twist hair into ropes and how to plait grass for making carrying bags. The womenfolk did not go hunting like the men, for they did not share the ancestral secrets. They spent much of their time looking for edible roots and seeds, or collecting grubs and insects that could be roasted for supper if the menfolk failed to catch game.

In spite of their hard life and their need always to be on the lookout for food, the aborigines had many forms of recreation. The children were fond of telling stories to each other and illustrating them with pictures drawn with sticks on the dusty ground. They also played cat's cradle with string, and some children knew more than a hundred variations of pattern. For the men there was the boomerang, which was sometimes used as a weapon for killing birds and other animals but was thrown mainly for sport. (The word

Tall, wooden headdresses are worn for the Rain Dance. The pattern is formed with plant down—some white, some stained—stuck on with blood. The crown is of emu feathers.



The patterns made by aborigines when playing cat's cradle often represented birds or animals. These examples depict an emu running, two emus standing, a bat, and two birds.

“boomerang” was invented by an aborigine tribe in New South Wales.)

Both returning and nonreturning boomerangs were made by the aborigines. In order to return, a boomerang must have one of its surfaces flat and the other slightly convex, with each “wing,” or arm, at a particular angle to the horizontal plane. Although these are quite subtle aerodynamic requirements, they were part of the secret knowledge of aborigine tribes for hundreds, perhaps thousands, of years. The older tribesmen fashioned boomerangs with their simple stone or wooden tools. They would spend their leisure casting them high into the clear desert air, where the boomerangs would circle once, twice, or even three times around the camp before returning to the thrower.

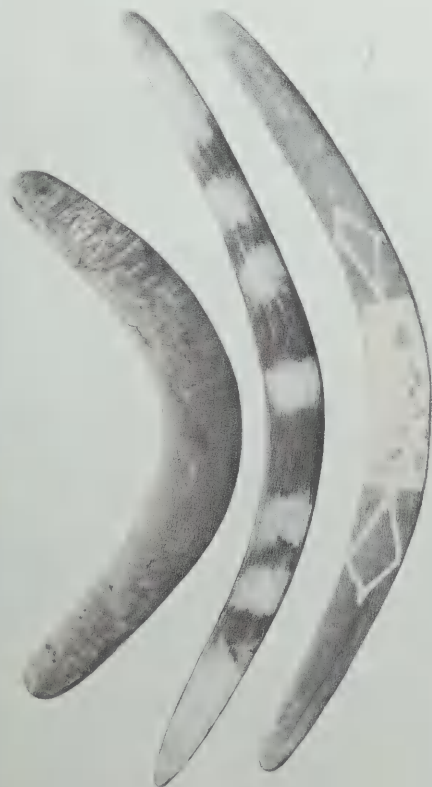
The boomerang is significant in being one of the few objects that the aborigines made solely or primarily for pleasure. People constantly on the move have little time for nonutilitarian things. Even pottery and sculpture, for instance, which are common among many primitive but settled cultures, were rarely found among the Arunta, who had to travel light. Yet even the simplest implements made by the aborigine tribesmen had the functional beauty of all well-designed tools. The creative spirit of the aborigines commonly found its outlet in their toolmaking skills and in their ceremonial body painting and headdress making. Unlike the tribesmen of Arnhem Land in Northern Australia, the Arunta produced no fine cave paintings.

The Clash with European Culture

type.

Early European settlers in Australia made their first contacts with the aborigines in the late eighteenth century. Perhaps not surprisingly, the simplicity of the natives' material culture and their “primitive” appearance led to the belief that they were the earliest form of men. Many of the Europeans regarded them as subhuman. Some thought it amusing to kill the natives for sport. Others employed them, more or less as slaves, for domestic labor or as stockmen on sheep stations. Few settlers in the eighteenth or nineteenth centuries imagined that the aborigine was capable of coming to terms with European culture.

As we have seen, the aborigine had an essentially passive attitude toward his environment. His traditions taught him that his natural surroundings were unchangeable. All the animals and plants of his desert home were evidence of the continuous rebirth of ancestral spirits. His nomadic life, his hard-earned knowledge of the secrets of hunting and toolmaking, were timeless features of his culture.



Three aborigine boomerangs.



The British explorer George Grey found this mouthless figure painted on the roof of a cave in northwest Australia in 1838. The more sophisticated cave painting below comes from Arnhem Land. This "X-ray" style of painting is also found among other Australian tribes. The Arunta themselves, however, never produced paintings of similar quality.

During the nineteenth century the European settlers, in order to establish sheep and cattle stations, forced the aborigines to leave many of their tribal lands. The settlers drove them inland from the coastal plains toward the deserts. In doing so, the settlers not only deprived the aborigines of their means of livelihood but also went a long way toward destroying their culture. The aborigine population declined swiftly. Around the year 1800, there were about a third of a million natives in Australia. Today there are only about fifty thousand. In recent years a positive policy of "assimilating" the natives into European urban culture has been adopted. Whether this can reverse or even halt the decline in the aborigine population remains to be seen.

There is always a temptation to equate a people's savage appearance with a lack of intelligence. Europeans considered the aborigine unintelligent because he had neither cultivated native plants nor domesticated indigenous animals. But neither did the European settlers in Australia attempt to do those things. They imported crop plants, sheep, and cattle. Even then they only farmed the richer soil of the east, southeast, and west coastal areas of the continent. The survival of any group of people in the central desert regions requires the constant use of skill and imagination. To this day, many areas of the desert interior that are familiar to aborigines remain unexplored, not to mention unsettled, by Europeans.



Hopi Indians of Arizona

The United States, as well as Australia, has its desert and semidesert regions. Large areas of Arizona and New Mexico consist of semidesert receiving less than twenty inches, and in some areas less than ten inches, of rainfall a year. In the northern half of these states much of the country is five thousand feet and more above sea level—a vast tableland that supports little natural vegetation other than sagebrush. The two main rivers of this region, the Colorado and the Rio Grande, have carved huge canyons through the plateau, which is studded with characteristic steep-sided, flat-topped hills called *mesas*. Away from the rivers, the soil is nearly always dry. Watercourses, or *arroyos*, may be flooded after a rainstorm but will often be dry again within days or even hours. In summertime the region is intensely hot. In winter, icy winds sweeping across the flat lands may bring heavy snowfalls.

About two thousand years ago, a group of American Indians settled in northern Arizona. Possibly these people were descended from tribesmen who had wandered south from what are now the states of Colorado and Utah and who had intermingled with more primitive groups inhabiting the Rio Grande and Colorado River valleys. Evidently, too, their culture was influenced by the great Mexican civilizations—one thousand miles to the south—via cultural and trade exchanges between tribal groups in northern Mexico.

The country where these Indians settled is as inhospitable as that of the Arunta aborigines. Yet by the twelfth century A.D. the Indians had developed a settled and prosperous culture based upon the *pueblo* (the Spanish word for "town"), while the Arunta never escaped from their hard nomadic life. The reason for this fundamental difference between the lives of these two groups of desert dwellers lies in the fact that the Indians farmed.

Possibly the Pueblo Indians learned farming techniques from other groups that had been in touch with the peoples of Central Mexico—the Aztecs for example. Certainly maize, or corn, their staple crop, had been cultivated by other tribes at an earlier period. So too had other food



A Hopi man and his daughter photographed in 1893. The girl's hair is arranged in the "squash blossom" style traditionally worn by unmarried Hopi women.

The area of Arizona and New Mexico settled by Pueblo Indians, showing some of the principal Pueblo communities. Oraibi, founded over eight hundred years ago, is still inhabited by Hopi Indians.



plants—beans, squashes such as pumpkins, and certain spices—that the pueblo peoples raised to supplement their diet.

What distinguished pueblo farmers from other, earlier, farming communities was the high quality of their crops in relation to the impoverished land in which they settled. They used primitive irrigation techniques to raise crops in the dry, sagebrush country, and this required great ingenuity and immensely hard labor. As “dry farmers,” indeed, the pueblo peoples have never been surpassed. Their skill enabled them to settle on the land and also gave them leisure to turn to other activities besides the constant search for food. They grew and harvested cotton and made garments from it; they became expert potters; they traded with other peoples. Clearly, their standard of living was far higher than that of the Arunta in Australia.

It was also far higher than that of many of the more primitive nomadic tribes in neighboring regions of Arizona and New Mexico. Thus the pueblo people constantly had to defend their crops and their families against the raids of hungry, marauding tribes. Some time between the eleventh and seventeenth centuries many of the pueblo communities found a partial answer to this problem by building their towns on the steep sides or on the flat tops of the mesas. The pueblos were thus transformed into cliff forts where their peoples and food stores could easily be defended against raiders. One of the best-known mesa pueblos is Oraibi, in northeast Arizona. It was founded in about A.D. 1100 by an Indian people called the Hopi (or “Peaceful Ones”) and is still a flourishing community today.

The first Europeans to discover the Hopi were the Spanish conquistadors led by Coronado, who in 1540 marched northward from the Aztec capital, Tenochtitlán (now Mexico City). What sort of culture did they find in these desert lands? The accounts of these explorers, and others who followed later, provide a vivid record of life in Oraibi four hundred years ago.

The approach to the mesa township was through plantations of corn and beans. Beneath the almost vertical cliffs, a path wound between outcrops of hard rock, then rapidly became steeper as it twisted up the side of the cliff. At the top of the mesa was Oraibi—a cluster of small angular houses of two or three stories built of stone blocks and clay plaster called *adobe*.

At this time Oraibi was a busy community with some two thousand inhabitants. The Hopi were a rather short people. Their skin was reddish brown, their hair straight and black



Remains of stone houses, abandoned in the thirteenth century, at Betatakin in northern Arizona. Pueblo Indians used to build their villages on the top of rocky hills, or mesas, and, as here, in the shelter of overhanging cliffs.

and often cut in a fringe at the front. The men wore little besides a soft leather loincloth and sandals made from yucca or cactus fiber. The women wore an ankle-length blanket over one shoulder, belted at the waist. The children usually ran about naked except in the colder winter months. The Hopi were a proud and independent people, very conscious of the fact that they had won a better living from the land than most other tribesmen in their region. They had the same deep understanding of animal and plant life as the Australian aborigines. Like the Arunta, they made stone spears and knife blades. But in addition the Hopi had bows and arrows for defending their pueblo and shooting game.

When not cultivating the land, the Hopi people often sat on the roofs of their houses to do their work. Men wove blankets on broad looms, while the women sewed, spun cotton, or made pots. The lanes winding between the houses were not crowded on ordinary days, for people preferred to live their family life indoors. Oraibi was, indeed, a quiet town. Yet there was a constant rhythmic beat of the stone pounders as girls and women ground corn every morning. Often, too, the silence was broken by the sound of singing. The Hopi at that time had no horses or other beasts of burden to add a sense of bustle to the streets.

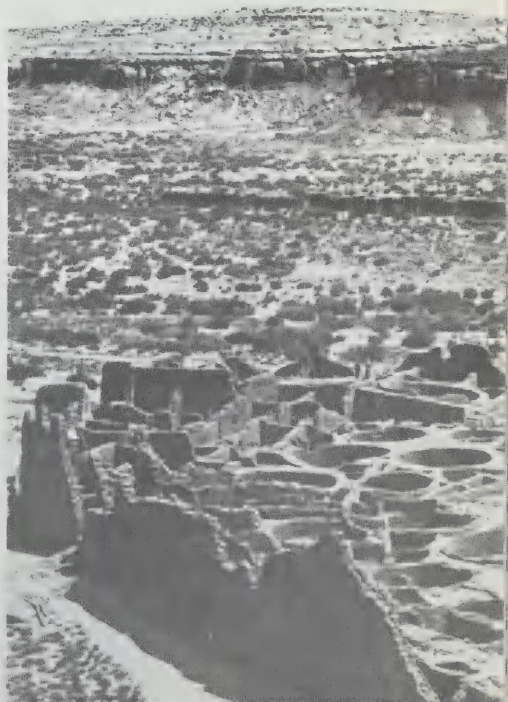
The livelihood of these people depended on the weather. If the rains failed, however, they had a reserve of grain, because tribal law obliged them to save one third of each crop of corn in case of drought. Water was never plentiful. They had to climb and scramble half a mile to a spring below the mesa for their water supply. Most of their crop fields surrounded the mesa, but quite a number of the younger people had to walk seven or eight miles to cultivate patches of ground that held enough water to support crops. The Hopi had a great respect for the sun that ripened the corn, for the clouds that watered their crops (or could destroy them with hail), and for the corn maiden, the spirit within each grain of fruitful maize.

Each Hopi clan, or group of related families, lived in a large communal house, to which rooms could be added as the need arose. Building a communal house was not a simple job. First, the elders of the clan met to discuss the best place for the site, how many rooms were needed, and the number of stories required. When the ground had been cleared and leveled, the plan of the ground floor was marked out. The women brought great quantities of local clay and mixed it with sand and water to make an adobe mortar. The men looked for slabs of rock of fairly even thickness and broke them into blocks that would be easy to handle.



Artist's reconstruction of Pueblo Bonito, one of the largest Indian settlements in New Mexico, built about one thousand years ago. It shows how the township was fortified against attack by dwellings built in a semicircle, the ends of which were linked by a protecting wall.

A view of Pueblo Bonito today shows the ruined walls of dwelling houses and the circular *kivas*, or sacred rooms.





Above: The Hopi village of Walpi stands like a citadel on top of a steep-sided mesa. Below: A two-storied house in Oraibi, built of stone and adobe. The door is a sign of European influence. Early houses had no access at ground level.



Then they piled the rocks along the lines marked out for the walls, using a weighted string as a plumb line to ensure that the walls were upright. As the walls rose, the women filled in all spaces between the stones with their mortar. When the walls had reached a little more than the height of a tall man, a roof or ceiling was made. First a layer of pine saplings was put in. On top of this a kind of brushwood mattress was laid and trampled down. Finally there was a thick layer of beaten clay, which acted as the floor of the room above, or as a passageway along the roof. The ground floor had neither windows nor doors, for reasons of defense. Access was through a hole in the roof. The upper floors were constructed in the same way, except that the rooms were built back from the outer walls by the whole width of a downstairs room. Thus a three-storied house looked like a flight of three steps. The upper floors were also built of stone and clay, but had doors and small windows. Most houses in Oraibi were three stories high, although some had a fourth story. There were no staircases. Rough wooden ladders made of poles lashed together provided stairways between one floor and the next. The communal house of most clans included a *kiva*, a large room devoted to religious ceremonies. Most *kivas* were built underground and were entered through an opening in the roof. Inside they were decorated with paintings illustrating tribal myths.

Once a communal house was complete, the people who lived there were responsible for keeping it in good repair. If

stones or clay broke loose in the walls they were immediately replaced. Wet clay was beaten in around the damaged area, and the whole wall made solid again. If the beams of the roof showed signs of weakness or rot, it was an easy, although dirty, job to take out the whole roof and rebuild it with new materials. When young people married and remained with the clan, they often had a new room built for them onto the side of the house.

Social Organization

There was no supreme chief. Authority rested instead with the wisest of the older men. However, the tribe was divided into several religious societies, each of which had its spiritual leaders. When quarrels arose in the town the leaders of the societies to which the opposing parties belonged would call the people to a meeting. There the matter was discussed in front of a group of elders. Everything was done to bring about peace by discussion. The people of Oraibi knew that unless they helped one another their town could not endure for long. At times of seed planting they helped in each other's fields. In certain important religious ceremonies all the men took part. When the cotton was ripe or the corn harvest was ready, women from every family helped to gather it in. And in time of war with other tribes, the Hopi stood together to defend their pueblo.

In the Hopi family the mother and father were always members of different clans. The children inherited their rights (including rights in communal land) from their mother's clan. This meant that although a boy might live and work with his real father, his tribal "father" was his mother's brother. The system worked well in practice because it linked most families in a close-knit chain of relationship. As among the Arunta, everybody was related in some way to everybody else.

It was partly this close tribal relationship between individuals that made possible the high degree of cooperation—in work and in defense—within each clan and among different clans. The survival of the pueblo peoples depended upon such cooperation, and among the Hopi no individual was permitted to overassert his individuality. The Hopi recognized no differences in rank or status between individuals, and disapproved of tribesmen who showed ambition. In sports, those who consistently won races were not allowed to compete because they spoiled the contest for others. Their highest regard was reserved for pueblo, rather than personal, interests. Even ceremonies to cure the sick usually contained rituals designed to promote communal



Hopi fields in Arizona. Despite the harsh, dry climate and impoverished soil, pueblo farmers grew crops—mainly of corn, cotton, and beans—that enabled them to establish prosperous settled communities.

benefits, such as rain, soil fertility, or safety from raiding tribesmen.

The Kachinas

The spiritual life of Pueblo Indians was based upon the *kachina* cult. The kachinas were not gods, but sacred spirits who acted as the representatives of gods on earth. They helped to bring the sun and rain, ensure the harvest, and increase the fertility of both the people and the soil. These spirits were present among the people for six months every year. Although the kachinas had no bodily substance, they could be made visible if specially initiated tribesmen donned the kachina masks and performed certain ritual dances. These masks were usually painted not with human faces but with special symbols that represented the blessings the kachinas conferred upon the people and their land (see illus. pp. 36-37).

To the younger children, the kachinas were a source of mystery and sometimes fear. They were told that if they misbehaved a kachina might try to catch and eat them. Good behavior, though, might be rewarded by a gift from the spirit. Certainly the kachina masks were awe-inspiring to a child. Some were square and black with a long, red mouth gash. Others had white cotton-wool hair, resembling clouds, across which the likeness of a rainbow had been painted. Still others had hair resembling serpents.

The day that the kachinas arrived at the pueblo was perhaps the most important one in the tribal year. The

Above right: View of the inside of a *kiva*. These are the places where many rituals are enacted, and each Society has its own. Below right: A sick boy is treated by medicine men in an underground *kiva*.

Below: Six portraits by Pueblo Indians of *kachinas*—representatives of the spirit world. At various festivals, tribesmen impersonated the spirits by wearing costumes and masks. Every detail of a costume symbolized some aspect of the personality of one of the spirits.



Kumbi Nataka belongs to a group of monsters who beg food from house to house during the festival of the bean planting.



Sio Calako was a *kachina* "borrowed" from the nearby Zuñi Indians. He appears during the celebration of the kachinas' return to the pueblo.



Sowinwu performs one of the dances before the *kachinas* depart. The circle indicates the six essential points of the Hopi spiritual life.

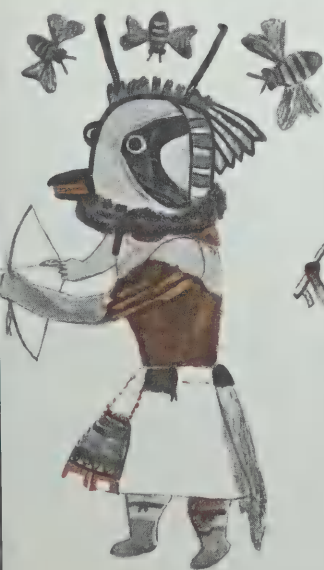


spirits (embodied in masked tribesmen) appeared suddenly, perhaps from behind rocks near the top of the mesa, and would dance and leap along the path into the town. Some beat tambourines, others blew whistles or shook rattles. On their way between the houses, the kachinas handed specially colored corncocks, honey, or other gifts to the children. Then, when they had come to a courtyard between the clan houses, the kachinas would rush to one of the sacred kivas and disappear into it through the hole in the roof.

Inside the kiva, things were different. All the masked tribesmen knew each other, so there was little mystery. Nonetheless, those trained in the kachina rituals believed their masks and costumes contained powerful magic from the spirit world. The kiva ceremonies were prayers for help and blessings from the kachinas—for rain and sun to ripen the crops, and for protection from storms and from the attacks of other tribes.

At the end of six months, the people held a dance in honor of the kachinas' departure. However, the tribes were never entirely separated from the spirit world. While the kachinas were away, high-flying eagles and hawks, captured when young by hunters, were believed to bring blessings to the people.

Every family had a bird tethered to the roof of its house. The birds were fed with the best food, talked to, and told all the family news, until their year as family guardians was over. They were then strangled by the head of the clan. Their spirits flew back to the heavens to tell of the happenings on



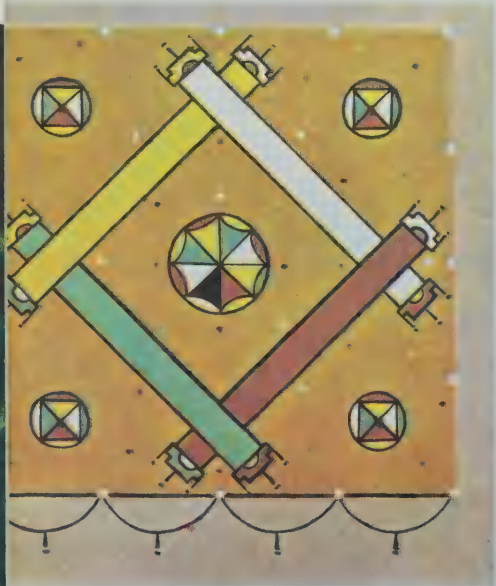
The dancer who impersonates Momo, the bee *kachina*, hums like a bee and shoots blunt arrows in imitation of a bee's sting.

One of a group of *kachinas* called Sumaiki, who honor the fire god. Since these *kachinas* are believed to be blind, they are led by a priest.

Coto, the star *kachina* of Oraibi (whose headmask carries a star symbol), sometimes appears in the festival in honor of the great snake.



The scene inside the Antelope *kiva* at Mishongnovi (a Hopi village not far from Oraibi) during the singing of traditional songs by the village priests. The boy and girl at the far wall of the *kiva* do not sing, but are painted and dressed in ceremonial robes connected with the prayers and songs. Below: A sand mosaic made for the Oraibi "Powamu" initiation ceremony. The square represents a house, the round shapes are squash blossoms, dots are herbs.



earth and to enlist the help of the gods. Their feathers were regarded as blessings and carefully kept for offering as prayers. The big wing and tail feathers were used for sacred headdresses, and the bodies were buried in a special cemetery.

Animals were featured in many of the sacred dances of the pueblo peoples, the Hopi snake dance being probably the best known. The dances were essentially prayers in dramatic form in which every movement of the body had its particular significance. Most of the dances were accompanied by drums and by human voices chanting in unison. Access to the *kiva* and participation in sacred dances and other rituals were confined to male members of the tribe, and women played no great part in the tribal ceremonies.

The most important activity in which everybody shared was the ceremonial hunt. On these occasions the people descended the difficult mesa pathways to the desert below. They spread out over a wide area, with the women waving blankets and shouting in order to drive the game toward the men, who were armed with bows and arrows or with curved throwing sticks. They might catch a deer or two, or even a bear, but more often they had to be content with hares, rabbits, rats, and mice. They let all snakes and lizards go free, for these creatures were considered to be magically related to humans and to confer protective powers on man. The people always offered a prayer to each animal they killed, so that its spirit might encourage others of its kind to breed for next year's hunt.

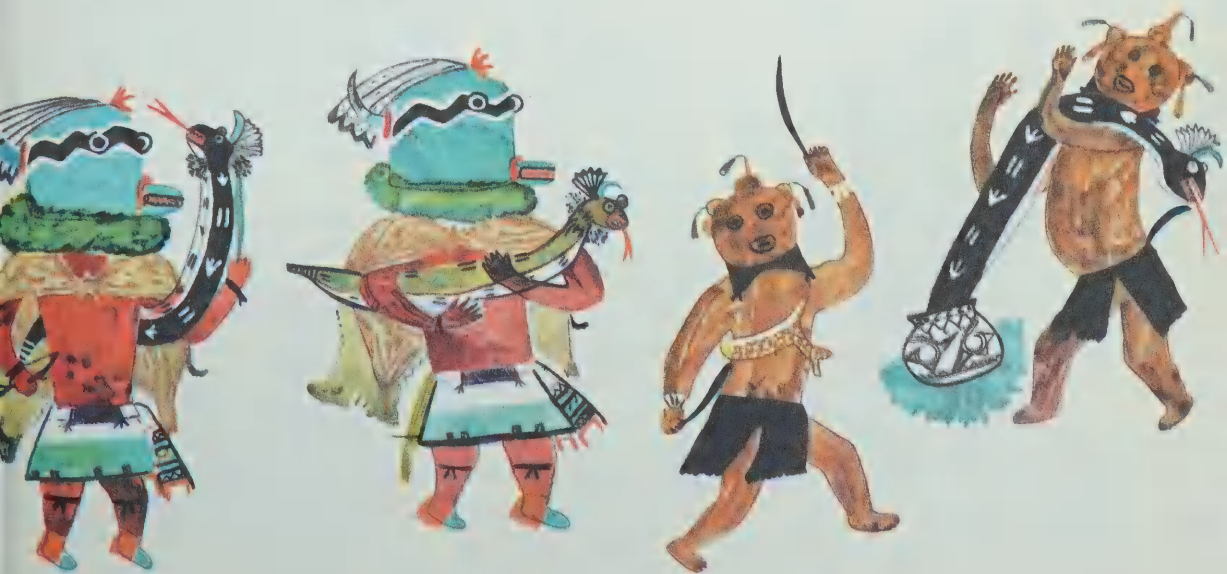
Hares and rabbits provided not only food, but also skins from which warm fur blankets were made. Each skin was cut round and round into a long thong of fur. This was hung on a loom frame like the threads that serve as the warp in weaving. Similar strips of fur were then woven into them as the woof. The resulting blanket of woven fur was thicker, more pliable, and warmer than a mere patchwork of skins. It was worn with the two top corners tied together in front of the throat so that it was like a cloak. In colder weather it could be belted in to cover the wearer from shoulders to knees. It was a comfortable garment and much used by the men on journeys away from the pueblo.

Hopi Crafts

Among the Hopi, the men did most of the weaving. Besides fur, they wove with cotton and with fibers of the yucca plant. They mainly used a loom with heavy wooden bars slung vertically from roof beams in the corner of a room. The looms were often four or five feet wide, and a skilled



An important Hopi occasion—the ceremonial corn grinding. To the left of the table is the striped clown *kachina*. Opposite him are two Hehea *kachinas* with grinding stones, behind whom stand four corn maidens. At the far end of the table is the chief. Some corn is ground, songs are sung, and the chief pronounces that the corn is good.



Above: Two masked dancers manipulate a snake—which (far left) is an "arm" of the costume, the apparent arm (red) being merely a dummy. In another dance (right) two clowns struggle with a snake effigy.



An early nineteenth-century drawing of a Hopi woman seated at a small loom. In earlier times most of the weaving was done by men, working on large looms in a kneeling posture. Left: A typical Hopi pattern.

Platter used for carrying bread.



weaver, working upward from the bottom, could complete a large blanket in a single day. The yarn, spun by the women, might be dyed rich red, brown, blue, or yellow by boiling it in the juices of desert plants. The yucca fiber, after beating and softening, provided a strong, cream-tinted cloth. Narrow looms were also used, chiefly for weaving sashes, headbands, loincloths, and decorative borders for garments.

When the cotton bushes had produced their white bolls, the people would take their baskets to the most distant point of the plantation and work their way homeward, picking the cotton as they walked. At the pueblo the baskets were emptied, and the seeds separated from the fibers by combing them out of the white fluffy cotton. The thread was spun from a handful of cotton attached to a spindle that was rotated in a small clay bowl.

The special art of the women was pottery. They made beautiful vessels of almost perfect symmetry without a potter's wheel, shaping the clay along traditional lines with their skillful hands. Each family had a particular place for digging clay and collecting sand. They were prepared to walk several miles to find the best materials. They dug up the clay in the desert, often at places where springs ran out of the rocks. Sand came from the arroyos, which were dry for most of the year. Both sand and clay were carried on the back in basketry packs slung from a broad leather band passed around the forehead.

To make a small pot, a woman put three handfuls of carefully dried and sifted clay and one handful of clean sand into a heap on a slab of stone. When sand and clay had been mixed, small amounts of water were added until the mixture became a thick heavy "dough" of clay. Part of it was rolled into a ball the size of a tangerine, then flattened to a disc shape about a quarter of an inch thick. It was then put aside for the base. Another ball was squeezed and rolled between the palms of the hands into a long round snake of clay. This was coiled around the flat base like a ring, and pressed firmly into it. As soon as one coil was on and smoothed into the lower layer, another one was added. Ring after ring went on, each firmly worked into the one beneath and then pulled to the correct shape and thickness. From time to time the pot was smoothed inside and out with a scraper made of a piece of gourd rind. When it was finished, the pot was placed away from direct sunlight, allowed to dry, and fired, or baked, beneath piles of broken pots.

After cooling, the pot was painted, usually with a black pigment made from powdered manganese rock mixed with



Above: A late nineteenth-century water vessel in the shape of an owl. Below: A bowl made about 1910. It was used for storing grain, and is decorated with a typical pueblo geometric design that represents mountains and clouds. Pottery was made by the women of the pueblo. It was shaped without a wheel by coiling strips of clay, then polished and decorated.



water. Other common colors were red, made from limestone containing iron oxide, and white, made from china clay found near outcrops of granite. The colors were applied with a brush made from a twig chewed at one end into slender fibers. When the paint was dry the potter took a smooth pebble as big as her thumb and gently polished the surface of the pot until it was smooth all over.

Defending the Pueblo

Atop their mesas, the Hopi and other pueblo peoples were safe from the fierce nomadic tribes like the Navajo who hunted food along the river valleys. But personal safety was valueless unless the pueblos could also safeguard their precious food crops in the desert below. Sometimes herds of wild bison would stray along the fringes of the desert. The pueblo peoples knew that the nomadic hunters would not be far behind them. At times the hunters would come in peace to trade fur and other goods in exchange for food. But if they had nothing to trade they would often attempt to raid the tidy corn, bean, and squash plantations surrounding the mesas. The Navajo were proud to kill men who resisted them, and the scalps of their enemies were a source of honor among their fellow tribesmen. The Hopi of Oraibi, however, were skilled in the art of defense. Lookouts on top of the mesa could spot a potential enemy many miles away by telltale clouds of dust or the smoke from campfires. Workers in the plantations would then be summoned to the safety of their cliff fort, while the war chiefs of the different clans would pray for help from their war gods.

Then a party of fleet-footed young men was sent down into the desert to decoy the raiders. If possible this group would lead them away from the fields and toward the rocky sides of the mesa. Meanwhile, other soldiers armed with spears and bows and arrows would take up positions behind rocky outcrops at the foot of the mesa and in the nearer plantations, to defend the crops and to attack the enemy from the rear. Once the raiders had been lured in among the rocks they would find that the youths they were chasing had disappeared. Suddenly, from all sides, they faced a hail of stone-tipped arrows, while from the cliffs above them slingstones would come hurtling down. Turning to flee, they would find their retreat cut off by other soldiers armed with spears and heavy wooden clubs. Only a fortunate few could escape from such an ambush. The survivors and their fellow tribesmen would plan to avenge their dead—on pueblos less well defended than Oraibi.

The Hopi Today

Although discovered by the Spanish in 1540, the Hopi pueblos were not taken over by the conquistadors until the end of the sixteenth century. It was not until 1629 that the Spanish established their Catholic missions at the pueblos. Spanish rule and the influence of the missionaries were decisively rejected in the pueblo rebellion of 1680. At this time most of the Pueblo Indians followed the example of Oraibi and built their townships on the mesas.

Hated as they were by the Indians, the Spanish nevertheless introduced important additions to the material culture of the pueblos. Iron tools, draft animals, fruit trees, and cattle brought by the colonizers all helped the industrious Indians to widen the scope and improve the efficiency of their agricultural economy. But the pueblo peoples, and the Hopi in particular, strongly resisted the attempts of Spanish and all later colonizers to influence their social and spiritual culture. Even today, life in Oraibi follows a pattern broadly similar to that of four hundred years ago.

The durability of pueblo culture depended on three factors. First, northern Arizona was (and still is) one of the most isolated and least populous areas of the United States. Second, the culture of the pueblo peoples created a social attitude that was inward-looking and tended to reject alien ideas and customs. Third, neither Spanish nor subsequent material cultures could much improve pueblo technology. Although the Spanish-introduced horse transformed the lives of the bison-hunting Plains Indians, modern farming techniques have yet to better the Hopi method of dry farming.

Since the mid-nineteenth century, the pueblos have been part of "Indian Territory"—land reservations of which Indians have exclusive use. In many parts of the United States, Indian cultures have been destroyed by forced removal of tribes from their ancestral lands to these reservations and also, to some extent, by economic exploitation. In a sense, the pueblo peoples were lucky. Neither their region nor their specific tribal lands have attracted white settlers. But despite Hopi traditionalism and resistance to change, their territory has slowly been whittled away by the white man so that they have become cramped. The land has become drier in the last four centuries, the soil is slowly becoming exhausted, and the sheep and cattle pastures are overgrazed. Even the expert Hopi farmers may not, in the long run, be able to wrest a living from their desert land nor preserve their isolation from the life of the rest of the United States.



This Hopi *kachina* doll represents the thunder spirit. The zigzags symbolize flashes of lightning, and the cotton wool on the back represents storm clouds.



Two Tuareg tribesmen as seen by an early European explorer in the central Sahara during the nineteenth century. As fierce warriors, they are heavily armed. Such colorful costumes are unknown today, when tribesmen are always somberly clad in blue, black, or white.

The camel was essential to Tuareg life. One of the oldest of domestic animals, it will carry a man and his equipment through conditions in which no other animal could survive. Without it there could have been no transdesert trade.



Tuareg of the Sahara

The Sahara is the largest desert in the world. From east to west it stretches for more than three thousand miles, while it averages over a thousand miles from north to south. The central region, dominated by the high massifs of Ahaggar and Tibesti, is hot and parched, often receiving less than an inch of rainfall a year.

Yet it was here, until recent years, that the Tuareg, the most advanced of all true desert peoples, not only lived but thrived. The presence in the desert of Berbers, from whom the Tuareg are thought to have originated, can be traced back to the time following the breakup of the Roman Empire. But our first reliable information about the Tuareg comes from the writings of Arab travelers from the thirteenth century A.D. onward. According to these sources, the Tuareg reached the height of their power during the fourteenth and fifteenth centuries, when they controlled trans-desert trade in the central and western regions of the Sahara. Southward across the desert went sugar, cloth, brassware, hand-copied books, and horses. Northward went slaves, ivory, gold dust, and ostrich feathers. The desert oases en route, where the traders had to stop for water, were Tuareg controlled.

Each caravan might consist of several hundred camels carrying goods worth many thousands of dollars, and from almost every caravan the Tuareg profited in one way or another. They bred, owned, and lent out at a price most of the camels on which the merchants depended. Against merchants who chose to use camels of their own they operated what we would call a "protection racket." They offered such merchants the services of Tuareg escorts—again, at a price. If the offer was accepted and the price paid, the merchant could rely on safe conduct, for the Tuareg kept their word. If the offer was rejected, the caravan would be attacked and looted by Tuareg bands mounted on fast camels and armed with iron spears.

But the Tuareg way of life was much more than a mixture of trading, banditry, and racketeering. The Tuareg were a people who adapted themselves to their environment in many ways. For centuries transdesert trading formed an integral part of this environment, and the way in which they took advantage of it was only a part of their whole pattern of adaptation.

Costumes, Customs, and Organization

For the Arunta and the Hopi, we can build up a fairly accurate picture of how they lived before outside cultures made any great impact on them. In the case of the Tuareg, this is impossible. By the thirteenth century A.D., when we first hear of them, they had already been in contact with the highly civilized Arabs for two centuries. And the Arabs had themselves learned much from the early civilizations of both Europe and Asia. All this implies that we cannot, for instance, be certain what religious beliefs the Tuareg originally held, for by the thirteenth century the Arabs had already begun to convert them to the Moslem faith. Nor can we be sure which tools and weapons the Tuareg evolved for themselves and which they borrowed from other peoples.

The Tuareg were a tall, slim, wiry people of mixed Mediterranean and African origins. The skin and hair of some individuals were light, and of others dark. Men often wore beards. They swathed their bodies with loose-fitting clothes—perhaps of a kind first introduced into North Africa by the Romans. Over a long undergarment like a nightshirt they wore a tunic and a pair of baggy trousers. The men wrapped their heads in a turban, or *litham*, with a veil that left only the eyes exposed. The Tuareg earned their title “People of the Veil” by the great reluctance of their menfolk to take off the veil, even to sleep. Tuareg women, on the other hand, unlike most others in Moslem North Africa, never wore veils.

The women’s refusal to wear veils was one of several Tuareg customs that may date back to a time before they began to embrace the Moslem faith. Another example was their rejection of polygamy—the right of a Moslem man to have more than one wife. And unlike the Arabs, the Tuareg inherited rights and property not from the father’s but from the mother’s side of the family.

Tuareg families usually lived in goatskin tents about twenty feet long, twelve feet wide, and not more than five feet high. A screen of cane matting ran around the inside of each tent, providing insulation against sun and wind. In winter, temporary shelters called *zaribas* were sometimes used instead of tents. They were made of dried grass lashed to wooden frames.

Tuareg society was divided into three classes. First there were the nobles, or aristocrats, made up of families who owned camels, goats, and sheep. They also owned agricultural estates in the oases, even though they preferred to live a nomadic life on their fine camels. Next there were the vassal clans, who tended their masters’ goats and sheep but seldom



A group of Tuareg rest at a desert camp. As is customary, the men of the tribe keep their faces hidden. The women, however, contrary to usual Moslem practice, are never veiled.

owned any. Those who did have flocks of their own had to pay the nobles for grazing rights. Finally—not to be considered as true Tuareg at all, since they were a different racial group—there were Negro serfs who did domestic work. They also cultivated the crops of dates, *dhurra* (a kind of millet), and wheat grown in the oases. These serfs, being essentially agricultural laborers, did not travel with their masters. A large share of the crops that they raised was handed to their overlords, on their periodic returns to the oases. In exchange, the Negroes received military protection.

Each noble clan, together with its subject vassal clan, made up a tribe. Both nobles and vassals shared in electing a tribal chief to represent them at meetings with other tribes. All tribes owed allegiance to the Amenokal, the chief of the tribal confederation. Close cooperation between tribes was necessary to ensure the safe passage of Tuareg-escorted caravans across the desert.

Although the Tuareg raided and traded far and wide, the movements of their main camps followed a well-defined pattern. In winter they remained near their homeland in the Ahaggar region. In summer they moved southward to what is now the northern boundary of Nigeria, where there was better pasturage for their livestock.

The prosperity of the Tuareg depended on three things: their flocks, their share of the oasis crops, and their profit from transdesert trade. The value of the last of these sources of livelihood varied greatly from time to time. In the sixteenth century, when European merchants began to use sea routes for their West African trade, the desert traffic declined so much that some Tuareg tribes took to raiding each other. Not until the eighteenth century was Tuareg society reunited on a smaller scale. Then, for a century, the Tuareg were once again able to control the desert trade between West Africa and Libya.

During the early part of the present century, the Sahara came under French control. The Tuareg, with their reputation for banditry and ferocity, were engaged in many skirmishes with the French Foreign Legion. Although they were never entirely subdued, many of them began to move southward to northern Nigeria, and others have continued to do so ever since. In recent years the discovery of oil deposits and of vast subterranean reserves of water has greatly increased the economic importance of the Sahara. The remaining Tuareg tribes have been further depleted as the engineer has moved in and their old economic and social system has largely broken down. Today, roads are being built and the camel caravan is becoming an anachronism.



For these nomadic people, shelter in the desert is provided by a low tent of goatskin slung on poles.

Tuareg nobles are too proud for manual work. But they offer protection to lowborn craftsmen, like this metalsmith, who supply them with much-needed goods.





Top: A lithograph of 1847 shows a Tehuelche hunter and two women. All wear the long skin cloaks with painted designs that were their chief form of clothing. The horse—introduced in the early eighteenth century—revolutionized Tehuelche methods of hunting and warfare. Bottom: A modern view of the Patagonian steppelands at the western fringe of the Tehuelches' range. Here no trees grow. In the background the distant pinnacles of the Andes lie under a mantle of snow.

2 LIFE IN GRASSLAND AND TUNDRA

Tehuelches of Patagonia

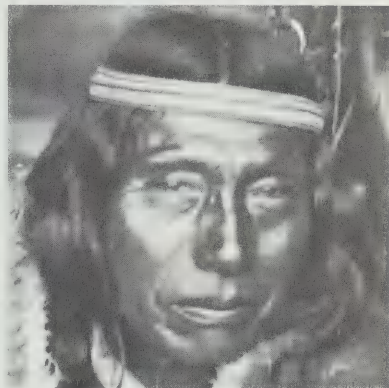
In many parts of the world, climatic conditions do not allow the growth of heavy natural vegetation, yet the land is not so poor as to be called desert. In the tropics such regions of poor grassland and few trees are often found in mountainous areas, below the snow line. In temperate zones, such steppelands are often bordered, on their side nearer to the equator, by the richer grasslands of prairie or pampas. In the Arctic such tundra regions, supporting moss, scrub, and short wiry grass, form a dividing line between icebound wastes and coniferous forests.

These regions are generally unsuitable for raising crops, so most of the primitive peoples who have inhabited them have been hunters or pastoralists. They have lived on the animals that graze the sparse vegetation and balanced their diet with sufficient vegetable food to preserve them from the deficiency diseases that accompany an exclusively meat diet.

One of the simplest steppeland cultures was that of the Tehuelches of Patagonia, the southernmost area of Argentina. Patagonia extends about a thousand miles southward from the Río Negro to the Strait of Magellan. The land rises gradually in a series of plateaus from the Atlantic seaboard in the east to the Andean Cordilleras in the west. For much of the year, strong and cold westerly winds sweep across the steppe.

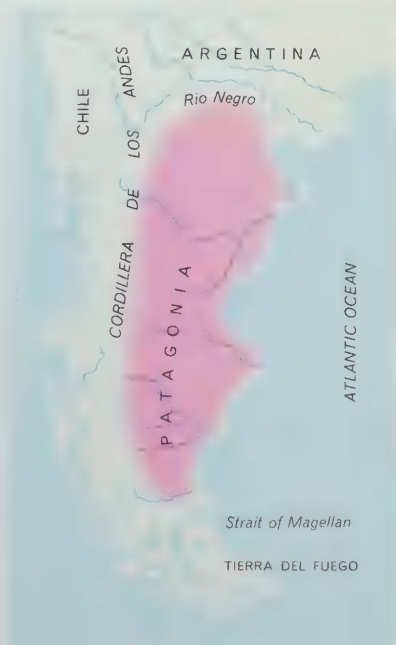
The early history of the Tehuelches, like that of many other American Indian tribes, is obscure. But it seems likely that their ancestors came from Asia, across what is now the Bering Strait, perhaps some twenty thousand years ago.

At various times the Tehuelche peoples roamed throughout Patagonia. We are concerned here mainly with those tribes which flourished during the seventeenth century and



A Tehuelche chief photographed in 1898. As usual among the men of this people, he wears his hair tied back with a band.

A map of the southern tip of South America showing (red) the region of the Patagonian steppe where the Tehuelche tribes roamed.



which lived south of the Río Negro, where the arid Patagonian steppe begins to give way to the more fertile pampas. Here was found an abundance of the wild life upon which the Tehuelches depended for food. Herds of guanaco, the wild ancestor of the llama, grazed on the wild grass. Less common, but plentiful, were herds of deer. Along the banks of rivers, viscachas (rodents like large chinchillas) made their burrows. Everywhere, there was an abundance of birds, notably the rhea, and of fresh-water fish.

The Tehuelches were tall and powerfully built. So impressive was their physique, indeed, that legends about Patagonian giants—first reported by the crew of the Portuguese-born explorer Ferdinand Magellan in 1520—were accepted in Europe. The Tehuelches' skin was golden brown in color. Their hair was long and parted in the middle. The men kept theirs in place with a skin hairband sometimes decorated with feathers. The women wore their hair in braids that often reached below the knee. For clothing, men and women seldom wore more than a loincloth covered by a simple cloak made of guanaco skins.

Group Life

The Tehuelches lived in groups, usually of between fifty and a hundred people, that enjoyed exclusive hunting rights in a particular area. Each group was composed of families related by descent through the male line, and led by the man with the greatest experience of the hunting grounds. Each



Eighteenth-century engraving of a sailor offering a biscuit to a family of Patagonians. Many early explorers told how Patagonia was inhabited by giants, an idea that clearly fired this artist's imagination.





These warriors are equipped with Spanish swords and lances but still wear traditional Tehuelche tunics.

Always on the move, the Tehuelches never built permanent houses. In this nineteenth-century drawing, families are seen dismantling their guanaco-hide tents, prior to leaving on horseback for new hunting grounds.



man married a woman from another group. Similarly, his sisters would marry men outside his group. In this way neighboring groups, or bands, were linked by ties of marriage and so tended to cooperate with one another.

Tehuelche groups lived in large communal tents, made of skins propped on rows of wooden poles, and open at one end. These tents were easy to dismantle and carry about during hunting journeys. Each family within the group had its particular quarters and was separated from its neighbors by a screen. At night the families slept on skin mats and used their cloaks as blankets. The tents were always smoky, for even in summer small fires of guanaco dung were kept smoldering to keep away flies and mosquitoes.

Sometimes all the groups making up a Tehuelche tribe would gather for celebrations or to plan war on another tribe that had trespassed on their hunting territories. Although the groups were self-governing, they were prepared to sacrifice their independence in favor of the tribal chief, who exercised dictatorial powers in times of crisis. Members of war parties put on thick helmets made of several layers of animal skins. Their bodies were protected by knee-length tunics made from three or four layers of hide and decorated with vigorous designs in red and black paint.

Tribal differences rarely led to large pitched battles. Fighting was confined mainly to small skirmishes at which the Tehuelches demonstrated their skill at ambush and tracking. The purpose of such engagements was to break up the enemy force by killing a few of its warriors and either capturing or driving the remainder from the hunting territory. While this was going on, other Tehuelche tribesmen raided the enemy's camp. Any women they could capture became wives and servants. Captured men were given menial work and kept as slaves.

During the summer, when the herds of food animals were large and easy to hunt, there were frequent tribal gatherings. These were occasions for organized dances and for consuming alcoholic drinks made from fermented seeds and fruits. Later in the year, as the days shortened, the ground was covered with a thick layer of frost in the mornings. Ritual dances were then held to encourage the sun to return from the north.

The Tehuelches lived well. They knew the land and the ways of their food animals, so they had little difficulty in finding nourishment. Yet they never stored enough smoke-dried food to enable them to rest from hunting for more than a few days at a time. Neither did they domesticate the herds of guanaco so that they might settle down in one place.



Guanaco, or wild llama, were a valuable source of food and skins. Originally, hunters pursued the beasts on foot, whirling the bolas and throwing it to bring an animal down and stun it. Later (below) the Tehuelches became adept at using the bolas while mounted on horses, brought from the north.



During the summer they roamed far out on the Patagonian plain. In the winter they moved westward toward the Cordilleras, where they found shelter in the wooded foothills.

The Tehuelches made tools of stone or bone, usually with wooden handles. They made personal ornaments from bones and shells, and used charcoal and natural ochre as pigments. They made some pottery but did not weave. For hunting, they made skin slings for bringing down birds, and spears, bows and arrows, and the *bolas* for catching the guanaco. The Tehuelche bolas consisted of a thong of hide about eight feet long with a skin bag containing a stone the size of a tennis ball attached to each end. A shorter thong, with a smaller stone at one end, was tied to the middle of the longer thong. Holding the smaller stone, the hunter whirled the two larger ones above his head, then released the bolas so that it flew toward the victim. The thongs would wind themselves around the animal's neck or legs, bringing it to the ground, while the whirling stones delivered it a crippling blow. The guanaco was then skinned and cooked on the campfire.

The Tehuelches made fire by spinning a hardwood twig between the palms of their hands and pressing its point against a lump of softer wood. In less than a minute the dust

ground out of the soft wood began to smoke and then to heat up sufficiently to ignite a few blades of dry grass.

To supplement their meat diet the Tehuelches gathered a variety of plants. Some were used as bulk food, while some, especially those that were sweet, were prized as tidbits. Others could be made into alcoholic drinks or herbal remedies. Plants were cooked by placing them in a water-filled bowl made of hide and dropping hot stones into the bowl.

To prepare guanaco hide for use as clothing or shelter, girls and women cleaned it with scrapers made of bone or stone set in a wooden handle. When all the flesh had been removed, the hide was rubbed first with warm ashes from a fire, then with a mixture of guanaco droppings and water. This helped to prevent it from rotting. Finally, the hide was rubbed with grease and kneaded to make it pliable.

Children

On journeys between camps, Tehuelche babies were bound with soft fur thongs to ladderlike frames covered with skins. The mother carried the frame upright on her back, supporting it with a leather strap bound around her forehead. In camp, this "cradle" was placed at an angle against a tree or post so that the infant could amuse itself by watching the family at work.

By modern Western standards, the young Tehuelche child was indulged by its parents and was rarely, if ever, punished. On its fourth birthday the child was the center of a big party, a feature of which was the ear-piercing ceremony. This was not a painful operation. A piece of soft wood was held against one side of the lobe and an awl (made from a bird's leg bone) was placed against the other side and given a sharp tap, making a small, neat hole in the lobe. The hole was immediately filled with a small plug, usually a grass stem. Then members of the family would sing traditional songs and call upon the spirits to protect the child.

Children began to learn tribal crafts soon after their fifth birthday. Girls learned how to sew guanaco skins together with animal sinew, and how to identify the various plants that the Tehuelches used for food, liquor, and medicine. They were also taught how to make carrying bags, and stiff leather pouches filled with small pebbles to be used as rattles in ceremonial dances.

The boys were taught how to make and use hunting weapons. The sling and the bolas were easy to make. But the shaping of spearheads, made from carefully flaked stones, was a craft that took several years to perfect. Hunting guanaco on the open plains required skill in the use of blinds



A Tehuelche camp. Children were indulgently treated, and dogs were kept both as pets and for hunting.

A drawing, dated 1866, of the form of rough "hockey" that was played by the Tehuelches. The ball was of wood, and injuries were common.





A nineteenth-century artist's drawing of a Patagonian Indian playing a pipe, possibly made of guanaco bone. The Tehuelches, like many nomads, had little musical tradition. This instrument produced only four notes.

and disguises, as well as stamina. Tehuelche boys of all ages raced with each other for hours to improve their speed.

By their mid-teens most boys knew the rudiments of first aid and could reset a broken leg. Around the point of fracture they made cuts in the flesh, into which they inserted a mash of herbs known to have healing properties. Then they would bandage the leg with specially cleaned skins and strap a wooden splint over the bandage. A major source of broken limbs was the Tehuelches' favorite game, somewhat resembling hockey, that was played with bent sticks and a roughly shaped ball of wood. Often the game was played at the time of tribal gatherings when there might be as many as a hundred men and boys on each side. The tall, muscular Tehuelches played hard and boisterously, with little regard for the limbs of the opposing team. Each game took a heavy toll of injuries.

Decline of the Tehuelches

From the early eighteenth century onward, the life of the Tehuelches was influenced, at first indirectly, by the Spanish colonists of South America. Araucanian Indians, escaping from the hardships of Spanish rule in Chile, pushed eastward and southward into Patagonia. They brought horses with them and the Tehuelches, quickly mastering the art of horsemanship, began to use horses for hunting. In the space of a few years, Tehuelche culture was transformed. On horseback the tribesmen could range over much larger hunting areas than before, and they no longer needed to be so intimately acquainted with each detail of the land as when they hunted on foot. To exploit the larger hunting areas, many groups linked by marriage joined together into larger bands of up to a thousand. Within these groups there was no fixed constitution, and leadership was based on ability rather than seniority. These bands ranged far and wide, not only hunting guanaco but also pillaging Spanish settlements.

By the late nineteenth century, the Argentinian government had pacified the Indians and opened up the country fully to white settlers. Since then the Tehuelche culture has virtually disappeared. Many descendants of the Tehuelches and other Indian tribes are now gauchos, or cowboys, who work on cattle stations owned by Argentinians of mainly European descent. They and their families have become merged into a Europeanized rural community. Even in the extreme south of Patagonia, where Spanish influence was long delayed, few traces of Indian nomadic culture now remain.

Samoyeds of Siberia

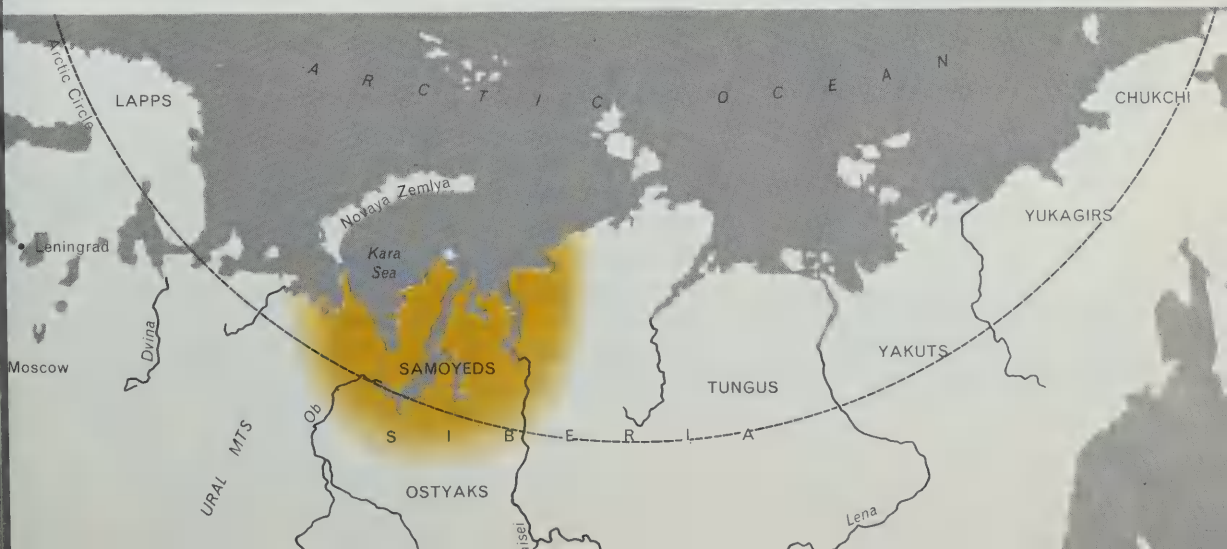
Northwest Siberia, extending from the Urals in the west to the Yenisei River in the east, can be divided into two main regions of natural vegetation. From the shores of the Kara Sea southward to a little below the latitude of the Arctic Circle is a region of *tundra*—a vast, almost treeless plain, often marshy, and interrupted here and there by narrow river valleys. The vegetation of this region is scanty, consisting mainly of mosses, lichens, and tufts of coarse grass. The more sheltered valleys support flowering plants during the summer. Southward and southeastward the tundra gives way gradually to dense coniferous forests. In both regions winter lasts up to nine months of the year and, at its coldest, brings temperatures below -55°F . In late April the long, hard winter gives way to spring, followed within a few weeks by the short, hot summer season.

With the soil frozen for the greater part of the year, agriculture is impossible throughout most of this large area. The peoples who lived here before western Siberia was colonized by Russian settlers were pastoral nomads who depended on the hunting of wild forest animals in winter, and on river fishing during the summer. A Russian chronicle of the eleventh century refers to these nomads as "Samoyeds." But the term seems to have referred to many different peoples who lived in Siberia—Yakuts, Ostyaks, Tungus, Yukagirs, Chukchi, and others—as well as to the particular people who later became identified with the name Samoyeds. Little is known of the early history of these people, but it is likely that they inhabited an area in the region of the Altai Mountains until the fifth century A.D. Then they were



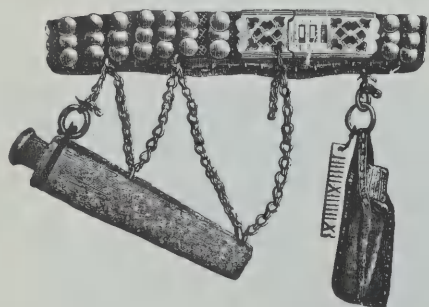
A Samoyed girl, portrayed by the eighteenth-century French explorer Cornelius Le Bruyn. She is dressed from head to foot in skins to protect her from the cold Siberian winter.

This map shows the homelands of the Samoyeds and various other Siberian peoples. Centuries ago all were loosely called Samoyeds.





An engraving from a book published in 1601 shows an early meeting of Samoyeds with Europeans. The musket shot (center distance) amazes the natives with their bows and arrows, but there is no fighting. The two groups are clearly friendly.



An ornamental hunting belt, illustrated in a book of travels written in 1881 by the Swedish explorer Baron Nordenskjöld. Besides hunting tools, it supports a notched time-tally made of wood.

driven northward by the Tartars. From reports given by Russian fur trappers working in the lower reaches of the Ob River at the beginning of the seventeenth century, the main features of Samoyed life some three hundred and fifty years ago can be pieced together.

The Samoyeds were a short, stout, muscular people, with black hair, sallow skin, and broad flat faces with characteristic oriental eyelids. They lived in small family groups, for their country could support only a thinly scattered population. But each group managed to live well enough off the animals it could catch. Where the southern fringe of the tundra gave way to pine forests, the hunters could kill deer, wolves, bears, and squirrels, whose meat they ate and whose hides they made into clothing. Since their hunting territories lay along river banks, they could also catch fish in traps and nets during the spring and summer.

The typical Samoyed home, simple but strongly built, consisted of a conical hut made of poles cut and shaped from the trunks of small trees. The floor of each hut was dug out to a depth of two feet or more below ground level to provide more headroom inside. In the center of the floor a small wood fire constantly smoldered. Arranged around the fire were simple frame beds, raised a few inches off the floor, on which the inhabitants slept in fur bags.



Le Bruyn's account of his travels includes this picture of a hut by the river's edge during the summer season. That was when the Samoyeds moved camp to concentrate on fishing.

Another drawing by Le Bruyn—seated on the left—reveals (in cutaway) the inside of a Samoyed hut, made of layers of bark supported by poles.



Government and Gods

In this sparsely populated land, one Samoyed family group might be separated from the next by as much as fifty miles. They were so isolated from one another that some families could scarcely understand the dialects of others. Each family group therefore had to be self-sufficient, and to a large extent self-governing. Each family had its leader, usually an elderly man who claimed descent from the tribal ancestors. There was no clearly defined tribal chief who controlled all the groups, but at periodic gatherings of several families a council of elders met to discuss laws. On such occasions it usually happened that one elder would influence discussion more than his fellows.

At these councils, which took place once or twice a year in a special big house, territorial disputes were settled. At the same time, people who had committed offenses against the tribe were punished by whipping, sometimes to death. Personal quarrels as they arose within the family, however, were usually settled by man-to-man fistfights or wrestling matches.

In their religion the Samoyeds acknowledged a creator, but they believed he had only a limited influence over their everyday lives. Of more immediate importance to them were



the great protective spirit of the forests and the uncertain-tempered spirits of the rivers. Every river had its own spirit. When the Samoyeds paddled their canoes past the junction of two rivers they threw little trinkets and carvings into the water as a gift to the spirits and prayed for good luck with their fishing. Here and there in the forests, and among clumps of bushes in the tundra, the people built temples—little square huts on stilts. Inside each were a few wooden dolls, which served as images of the spirits. Sometimes a stone that seemed to have been magically carved by nature was thought to be a suitable “home” for a spirit. People came to the temples from time to time to ask for good fortune in their hunting and to make presents of fur clothes to images.

Each temple was watched over by a *shaman*—a priest or “medicine man”—who was the religious leader of the families living near him. A young shaman was usually a man of sensitive nature who had seen visions. He then received training in his calling by studying under an older shaman, who taught him prayers and rituals. The older man also taught him how to go into a trance and send his soul to the spirit world to seek help and information for the people on earth.

When a family sought the shaman’s advice, he would come into their hut, discuss their problems, then sit down and begin to drum with his fingers on a big tambourine. Eventually he would go into a trance, sometimes in silence but usually shouting and ranting as if having a nightmare. After a while he would calm down, regain consciousness, and tell the family what advice he had received from the spirits. Sometimes the advice was good, sometimes bad. People were quick to discover which shamans were able to

Left: Dolls of spirits called *bolvans* were roughly carved images, some with crude, painted features. Others took the form of long sticks with carved faces, which were stuck in the ground at holy places. The seventeenth-century engraving (above) shows a reindeer sledge passing a row of such tall idols.

The Samoyeds, like all the natives of Siberia, based their religion on shamanism. The shaman’s drum was a hoop covered with reindeer hide, and he banged this to establish contact with the spirits.





A drawing of Samoyeds and their reindeer, made on the German explorer Finsch's expedition to Siberia in 1876. Unlike their neighbors, the Tungus, the Samoyeds rarely rode on their reindeer. They always used sledges for transportation.

provide the best service, and would travel great distances to consult them rather than go to less reliable men nearer home.

The Samoyed family kept reindeer as well as a few herd dogs. Certain domestic reindeer were set aside for the gods and spirits, sometimes as an act of expiation for sins, and sometimes to enlist the spirits' help in curing sickness. Such reindeer were not sacrificed but became sacred animals. Their coats were trimmed into patterns, such as masks and figures to represent the spirits of forest and river, and they were separated from the rest of the herd. When they eventually died, it was forbidden to eat their flesh or make their hides into clothing.

Wealth and Work

The most conspicuous evidence of a Samoyed family's wealth was its herd of reindeer. While poorer families had only ten to twenty reindeer, the richest could boast herds of three hundred and more—herds that would have been difficult to move about without the help of dogs. Although these domestic herds were an insurance against hunger and provided milk, the Samoyeds were devoted to them and rarely ate their flesh. Instead, they relied for their supplies of reindeer meat on the wild herds that roamed the tundra and the edge of the forest. Even so, the domesticated herds were an aid to hunting. During the breeding season the domesticated female reindeer were used as decoys to attract wild stags, which were then killed for their meat and skins.

The domesticated reindeer were used mostly in winter, when they hauled the Samoyeds' sledges from one camp to another, or to and from the animal traps in the forest. The hunter's sledge usually consisted of a flat platform of wood on simple runners, and was drawn by two reindeer har-





Bears were an object of special veneration to the Samoyeds. The nineteenth-century painting above shows that, unlike other animals, they were hunted only with spears. Their skulls were set on poles at sacred places (below).



nessed side by side. When it became necessary for a whole family to move camp, however, larger sledges with raised sides were used. These were drawn by teams of six or eight reindeer and could accommodate a man's wife and children together with their personal belongings and the timber with which they could build a hut.

The Samoyeds relied on arrows and spears, tipped with bone or imported iron, and traps for catching most of their food animals. Snares made from animal sinews or plant fiber were used for the smaller animals. Foxes and wolves were caught in deadfalls, and spring traps were laid for wild reindeer. Bears, however, were the object of special veneration and were not snared or trapped. Instead, a young man armed only with a spear would prove his bravery by "challenging" a bear to mortal combat. If he won his personal battle he made a cap from the bear's muzzle and scalp. Then the animal was cut up and guests from neighboring families were invited to a ceremonial feast. The Samoyeds believed the bear to be an incarnation of the spirit of the forest, and regarded its heart as an especially potent source of magic.

With the arrival of spring the icebound rivers thawed. Unable to flow northward into the still-frozen Arctic seas, the water often flooded the low-lying valleys. Then, as the soil began to dry out, a profusion of flowering plants sprang from the thin topsoil of the tundra. Within a few weeks spring gave way to summer. As the temperature rose to 70° or 80°F., the camps would be plagued by swarms of mosquitoes, which people tried to drive away from their homes with smoky fires. According to Samoyed legend, mosquitoes were created from the ashes of a man-eating giant who had been killed and burned by the original tribal ancestor. Even now the mosquitoes were trying to eat men, and could be frightened away only by smoke.

The Samoyeds erected their summer homes on the edge of the best fishing rivers or on the sandbanks in midstream. These portable, warm-weather huts were conical in shape like the winter homes, but were made from slender sticks covered with a windproof layer of birchbark. Summer was the great fishing season for the tribesmen, who fished from slender, four-man river canoes made of the hollowed-out trunks of trees. Fish were caught with seine nets that hung vertically from floats and, when full, could be hauled to the bank of the river. After it was landed, the catch was hung up on wooden frames for drying and smoking.

Much of the fish was saved for the long winter months. Dried fish mixed with fish oil was considered a delicacy. The



A Samoyed family about to leave its winter quarters for the summer camp. Dogs have rounded up the reindeer, and belongings are already loaded onto big sledges. Once the tent is dismantled the family will be ready to move off.



A woman's fur hood decorated with imported metal ornaments. Samoyed women often wore their hair braided and decorated with similar brass or copper ornaments.



The Samoyed today receives a wide general education at Soviet schools.

fish eggs, or roes, could be boiled in water and eaten as a soup. Fish, like meat, was also deep-frozen in the winter snows. The freezing process broke down the cell structure of the flesh so that small pieces would slowly melt in the mouth and provide a tasty, nourishing food. The Samoyeds had other uses for fish, of which the strangest was the making of fishskin garments. Fishskins, sewn together with the scales on the outside, provided close-fitting, windproof underwear for adults or swaddling for babies. Also, fishbones provided barbs for arrows and made sharp hooks.

The simple life of the Samoyeds, devoid of all but a few personal comforts, was determined by the harsh environment of the Siberian tundra and pine forest. True, their skill as hunters and fishermen ensured them adequate supplies of food. But the limitations of game and river fish forced them to adopt a way of life based upon isolated family groups.

The Samoyeds made a virtue of this, priding themselves on their independence and freedom from any larger authority. But freedom and independence of this kind tend to be illusory when exposed to the influence of more advanced societies. Because of its fragmentation, Samoyed culture could not remain unaffected by the Russian colonization of Siberia from the seventeenth century onward. Some Samoyed groups managed to preserve their identity for a time by working as fur trappers for the Russians. Others worked as manual laborers for the colonists, and were gradually absorbed into the European community. In more recent times, the discovery of vast mineral resources in the northern Urals and elsewhere in the Siberian Arctic has greatly increased the pace of European colonization. Today the Russians far outnumber the fifteen thousand Samoyeds still left in northwest Siberia.



Masai of East Africa

The Masai live in southwest Kenya and northern Tanzania, far from the Samoyeds' homeland. Both regions consist mainly of flat or gently rolling country. But whereas the Siberian tundra is low-lying and largely icebound, the land of the Masai consists of high, grassy uplands that are always warm and are refreshed twice yearly by seasonal rains.

The Masai are of Nilo-Hamitic stock. That is, they derive partly from Hamitic peoples, such as the Ethiopians, and partly from Negroes. Hamites have been in northeast Africa for more than six thousand years, but it is likely that the Nilo-Hamites are of fairly recent origin and are not the first inhabitants of what is now Kenya. The Masai and other Nilo-Hamitic tribes were probably formed only a few centuries ago, while their peoples were gradually moving southward through Africa. In the case of the Masai, this migration was checked, near the beginning of the nineteenth century, by Negro peoples living in what is now northern Tanzania. As a consequence, the Masai settled in the plateau region between Mount Kenya and Lake Victoria.

During the first half of the nineteenth century they were the great warrior tribe of East Africa. They were a tall, slim, finely proportioned people, with narrower noses and less prominent lips than those of pure Negroes. Masai warriors wore their hair in braids, short at the front but descending to below the shoulder blades at the back. All other members of the tribe, including women and girls, shaved their heads. The appearance of both men and women was distinguished by the extraordinary size of the earlobes. When a child was young, holes were made in the lobes and then stretched systematically over a period of years. Eventually the aperture was several inches in diameter and could accommodate heavy wooden or metal ornaments.



Portrait of a Masai chief. A close analysis of Masai physical features confirms that this people are a mixture of Negroid and northern African stock.

Map showing location of the Masai (ocher) on the grassy East African uplands—good country for cattle.



Cattle, Pivot of Masai Life

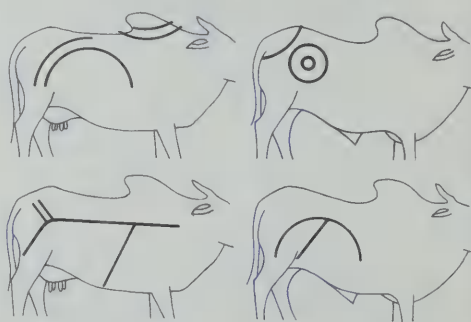
The Masai economy was based on herding cattle of a small, hump-backed type. Each animal in a Masai herd was branded with a special design on its flank and had the edge of its ears clipped to distinguish it from the cattle of neighboring tribes. The cattle were so docile that two or three young children were often put in charge of a large grazing herd.

Apart from occasional supplies of beans or corn received in trade from the neighboring Kikuyu tribes, the Masai depended almost entirely on their cattle for food. Milk and beef formed their staple diet. They never touched fish, birds, or reptiles, and used herbs and other plants only for medicinal purposes. In addition, they drank the blood of their cattle. This they obtained by binding an arrow a little above its tip, so that it could not penetrate deeply, and then shooting it into the jugular vein of a cow. When they had filled a small gourd with blood, they bound up the wound with such skill that the animal fully recovered in a day or two. The cattle also provided the leather from which the Masai made sandals, and the hide from which they made ankle-length skirts for the women and the long cloaks that the men wore tied at one shoulder. The cattle skins were softened by smoking and kneading them over a fire and then greasing them with milk fat.

The Villages

The Masai were divided into clans, or groups of families, each of which had a *manyatta*, or village, at the center of its grazing land. The village consisted of a collection of dwellings arranged in a circle that might be a hundred yards or more in diameter. The dwellings were long, low huts, six to eight feet wide and about twenty feet long, made of saplings, brushwood, and cow dung. During the rainy seasons the roofs were made watertight with skins. Most of the huts forming the circle were built close together, but here and there a wider gap was left to serve as a gateway to the grassy plains outside the village. In the center of the ring the chief, or head clansman, had two huts, one for himself and one for his wives. Each village was encircled by a *boma*, or thorn fence, about seven feet high. This prevented the cattle from straying after they had been driven into the enclosure at night, and was also strong enough to keep out most wild animals.

Some clans had two villages. The second was near wood-





Blood is collected for drinking (above). A vein in the neck of a cow has been pierced, and the gushing blood is caught in a gourd. Masai brand their cattle (left) according to the owner's clan. Where cattle are wealth, there must be no doubt about ownership. Some clan marks are shown (diagram).

lands, where the cattle could still find food when the mid-summer sun had parched the grass on the open plains. Before moving from one village to another, the Masai cleaned and tidied their homes and left supplies of firewood ready for their return later in the year. If travelers came to the empty village, they were welcome to stay as long as they liked provided they replaced everything they had used before they moved on.

Among the Masai's closest neighbors, and held in great respect by them, were the Elgunoni, a tribe of ironworkers and blacksmiths. The Elgunoni collected from river beds a form of iron ore sometimes known as iron sand. With the help of simple bellows they smelted it in clay furnaces fired with juniper logs. Then they shaped it on stone anvils with iron hammers and chisels. It was the Elgunoni who, in exchange for skins, beef, and milk, provided the Masai women with a rich variety of metal ornaments. More significantly, they made the long-bladed spears and *pangas*, or chopping swords, that formed the principal weapons of the Masai warriors.

The Warriors

The Masai were only one of many East African tribal groups that depended upon cattle farming for their livelihood. What distinguished them from most other pastoral peoples of this region was the martial character of their social organization. The highest social prestige and the greatest political power rested with the *el Moran*, the graduate warriors of the tribe.

Many European observers have reported the apparent brutality with which young Masai boys were treated by their elders. This was part of a deliberate toughening-up process to prepare the boys for the time when they would be trained to become warriors. Every four years or so, all Masai boys between about eleven and fourteen years of age were called upon to begin military training. The father of each boy bought his son a shield (usually made by the Dorobbo, another neighboring tribe) and painted on its face the special markings—the coat of arms, as it were—of the clan to which the boy belonged. Extra designs were added to indicate the future warrior's "age set." From the Elgunoni the boy's father would buy his son spears, a panga, and a wooden club.

Then the boys left their villages and went to live in special camps that would be their home for the whole of their life as warriors. Every recruit had to undergo initiation tests,



Young Masai girls wear armblets and anklets of iron and light chains in their ears. As adults they wear metal necklaces and earrings. A wife may not remove her earrings in her husband's presence.



Too young yet for military service, this Masai boy watches over the goats. Such boys had to be especially attentive to the cattle, source of wealth and symbol of status. Within a few years he will begin training as a warrior.

which included circumcision. Initiation was arranged within local districts, and all members of a given age within that district constituted an age set. Members of an age set, with a leader and an assistant chosen from among their ranks, remained together throughout their period of military service.

The warriors—graduates as well as trainees—led a Spartan existence devoted to a constant preparation for war. They were not allowed to marry (although young girls from the villages lived with them at their camps). They were forbidden all personal possessions other than their weapons, and they could not drink or smoke. Much of their time was spent in vigorous physical training and in learning the art of fighting. One of the rigorous tests by which a young warrior could prove his skill and courage was to join a few others of his age set in a lion hunt, using only spears and shields.

Having tracked a lion to its lair, two or three of the young warriors went forward to flush it. The rest encircled the position and attacked the beast when it came into the open. Once cornered by three or four Masai, a lion rarely escaped. The Masai, a strictly pastoral people, did not eat game. When they killed a lion they did so for sport, or because it had become a source of danger to the villages. When they killed smaller animals, they did so only to use hide and horns for clothing and decoration.

To the Masai warrior, fighting was an end in itself. It required no moral justification based on real or imagined grievances against other tribes (although in fact there was



Line-up of Masai warriors in full battle array. The men's warlike appearance, coupled with their reputation as fierce fighters, made them much feared among neighboring tribes. Masai men served as warriors until nearly forty years of age, and all real political power was in warrior hands.



The highest social prestige rested with the graduate warriors, or *el Moran*. Their ostrich-feather headdresses were more than mere pieces of uniform. They also made it hard for enemies to count their numbers.

The designs on a shield are called *sirata* and each has a name. A *sirata* indicates the clan and the age group of the owner of the shield.



hostility and rivalry between the Masai pastoralists and the Kikuyu agriculturalists). The Masai were held in such fear that their warriors could steal cattle from a neighboring tribe almost with impunity.

Yet Masai warriors never made surprise attacks on other tribes. They considered it a point of honor to send a warning to their chosen victims. Sometimes they captured a boy tending cattle, made a few light cuts on his face and ears, then sent him back to his village with the message that they would be back in so many days' time. No tribe could ignore such a challenge, and at the appointed time the two opposing forces would march out of their villages to do battle.

On the warpath, Masai warriors wore a waist-length cloak and a headdress made of ostrich feathers stuck into a cowhide band. The warrior inserted his face through the band so that it went under his chin and over the top of his head. In his hands he carried his spear and shield. Around his waist was a hide belt into which were thrust his club and his panga in its leather scabbard. Behind the warriors came their girlfriends, singing, dancing, and exhorting the men to show courage and skill in the fight. When the opposing forces met, they drew up in two lines, facing one another. Then, with ferocious war cries, the warriors joined battle in a series of man-to-man duels. Usually the Masai won because they were better prepared, physically and psychologically, for war. They not only had greater skill in the use of spear and panga but were also convinced of their superiority over any other warriors. At the end of the battle they chased away any of the enemy they failed to kill, and took their weapons and cattle as war booty. They never tried to take prisoners. They had no need for more herdsman and no desire to feed men who were not of the Masai.

The Masai's was essentially a young man's society. The village chiefs and the *laibons*, or tribal prophets, had some influence as advisers. But the warriors themselves took the decisions about cattle raids and wars against other tribes. A Masai spent about twenty-five years as a warrior. At the end of his service, when he might be nearly forty years of age, he became an elder. He was then allowed to marry one or more wives, own cattle, smoke, and drink. As an elder, he might be allowed to organize initiation ceremonies for young warriors, and would be asked for advice in the selection of age-set leaders from his own village. But he had little real control over tribal affairs.

For the men of the Masai, life consisted of a hard and strenuous youth and early manhood, followed by a peaceful decline into old age. It took the opposite course for the



Two of a line of Masai warriors perform a jumping dance. Keeping perfect time with each other, the men leap up and down, making no use of their arms, and utter grunts in unison as they touch the ground.

women. Because of the enforced bachelorhood of the warriors, a girl's husband was usually many years older than herself. Young wives spent their days looking after their children and cooking food for their families.

When they were too old to bear children, their lives became most arduous, for these older women provided the manual labor upon which much of the life of the village depended. They built the village houses, erected and maintained the enclosing thorn fences, collected firewood. And—with the help of donkeys—carried their families' possessions when a clan moved from one village to another.

The Masai Today

Systematic European exploration of Masai country during the 1880s coincided with the decline of the tribe. In 1883 and again in 1889 cattle diseases drastically reduced their herds. Within the same period thousands of the tribespeople died in a smallpox epidemic. To these natural calamities were added outbreaks of civil war and reprisals from other tribes that had suffered from Masai raids in the past. As a consequence, the Masai accepted European rule without a fight. After Kenya became a British colony in 1895, they were put on a tribal reserve near the border of what is now Tanzania. For a while they were administered through their laibons, until the British realized that these prophets had no great political power among the people. Since then native councils, in which the warriors are strongly represented, have been used. The heads of these councils meet in higher, regional assemblies.

Modern medical and veterinary techniques have helped the regrowth of both the Masai population and their herds. Recently the Masai were estimated to number about 150,000, which is probably four times their population at the turn of the century. They retain their pastoral way of life and many of their original customs, but intertribal war and cattle-raiding have been suppressed. And their growing herds now have to compete with wild animals for grazing and water, as much of their land is game reserve territory.

Today the main problem facing the Masai is a political one. Kenya is now independent, and the agricultural Kikuyu—the largest and most coherent tribal group in the country—are the dominant force in Kenya politics. The Masai and other small pastoral tribes, however, still retain much of their traditional contempt for the nonpastoral Kikuyu. The social and economic development of the country as a whole will depend to a large extent on whether these basic antagonisms can be peacefully resolved.

Mandans of North Dakota

The plains regions of the world vary greatly in the amount and variety of vegetation they can support. As we have seen, Patagonia was too arid, and the Siberian tundra too cold, to allow the native peoples to farm the land. Although the Hopi managed well enough in their parched region, it is generally true that two basic necessities for raising plentiful food crops are a warm growing season and an annual rainfall of at least twenty inches. Both these needs are met in that area of the United States made up of eastern Oklahoma, Kansas, Missouri, Nebraska, Iowa, Illinois, Indiana, western Ohio, and North and South Dakota—now one of the richest agricultural regions in the world.

Until it was colonized by Europeans, this rich natural grassland region was the homeland of Indian tribes often referred to as the Western Farmers. Among the most prosperous of these were the Mandans of North Dakota, a tribe made up of thirteen village communities near present-day Bismarck. The Mandans farmed the fertile land in this stretch of the Missouri River valley, raising bumper crops of corn, squashes, and beans, and trading their crop surpluses with neighboring nomadic tribes. The Mandans were not only farmers but also skillful hunters.

The Mandans were first reported by French fur traders in the 1730s, who found the villages useful as a trading center for nomadic tribes. But the Mandans' homeland was not thoroughly explored nor their villages carefully described until the early nineteenth century. There was little detailed study of their social organization until the first decades of our own century. By this time their way of life had been greatly modified by the advent of horses, introduced by the Spaniards in New Mexico, and obtained by the Mandans only around 1800. Before they had the horse, however, the Mandans used dog teams to pull their sledges during their winter migrations. This and much else of what we know of



Portrait of a Mandan chief drawn by a Swiss artist, Karl Bodmer. Chiefs were chosen largely on their record of courage in battle.

The Mandans of North Dakota were one of a number of Indian tribes known as the Western Farmers.





This picture of the 1830s shows the typical dome-shaped lodges of the Mandans. The tree trunk in the central area was an object of great veneration and an important feature of the annual religious ceremonies.

A Mandan village perched on a steep bank of the Missouri River. The "bull boats" in the foreground (like the one on the roof in the picture above) were made of buffalo hide stretched over wooden frames.



the old Mandan life was discovered by talking to older tribesmen who still knew of the ancient ways.

The Mandans were a strongly built people, broad and somewhat shorter than their old enemies, the neighboring Dakota. Like most Indians of North America, however, they were of mixed origins and varied widely in their physical characteristics. Most had the copper-brown complexion of the true American Indian, with straight dark brown or black hair. Their clothes were made from the tanned skins of antelope or deer, although occasionally beaver, wolf, fox, or even cougar skins were used. The outer robes of adults were made of bison skins, worn with the fur inward in summer and outward in winter. Women and girls wore skirts of soft deerskin, while the men wore loincloths or leggings. Men and women alike wore moccasins on their feet.

The lodges, or houses, of a Mandan village were each large enough to accommodate twenty or thirty people—perhaps three or four generations of a single family. From the outside, the lodge resembled a dome-shaped, grassy hillock. Its roof, curving gracefully to the ground, was supported on posts and crossbeams and consisted of a wooden framework, a layer of brushwood, and an outer covering of earth a foot or more in depth. Inside, the lodge was warm and spacious—often as much as thirty feet across. In the center a small fire burned in a shallow pit, its smoke escaping through a hole in the roof. The family spent much of their leisure time indoors, the men painting their ceremonial robes or making weapons, the women sewing or embroidering. In a corner of the lodge, older and no longer active men would while away their time chipping stones to make



Above: The interior of a Mandan lodge, indicating the great size and height of these circular dwellings. They often housed more than twenty people. Clothes and equipment were hung or propped on the wooden posts of the framework. A similar scene (right) shows beds with curtains of bison hide.





arrowheads. At night, each group within the family retired to its particular section of the lodge, each section being divided from the rest by skin screens that gave a little privacy.

The womenfolk were up at dawn to pound corn and to prepare the fires for heating stones. Then they took the hot stones and dropped them into skin buckets filled with fresh water from the river. When the water boiled they added a mixture of chopped wild plants, roots, and corn and stirred it into a thick gruel. The men and older boys always ate first, the women and young children making themselves content with what was left. It was thought right that the men, who did the hunting and fighting and much of the heavy work of building, should be fed first.

This did not mean, however, that women were the inferiors of men. Mandan women held a strong position within the tribe. Land and lodges were inherited through the female line, and it was the men who left their homes on getting married. Moreover, as owners of the land the women were responsible for tilling the soil, although they could rely on help from the men at harvest time. The one farming activity in which the men were dominant was the cultivation of the sacred tobacco plant.

The bull dance, part of the annual *Okipa* ceremony, was intended to ensure the arrival of the bison later in the year. It was performed forty times during the course of the ceremony, around the central cedar trunk. This painting by Karl Bodmer shows a closeup of the dance. A painting (page 72) by the American artist George Catlin gives a wider view.



Scalps and Ceremonies

There were no hereditary village chiefs among the Mandans. Men outstanding for bravery and wisdom were invited by



An important feature of Mandan social organization was the system of societies, or religious clubs, all graded according to sex and age. Above are members of the society known as the "Half-shaved Heads," performing one of their ceremonial dances. Among the most important female organizations was the White Bison Cow Society, several of whose members are shown below.



the elders to join the tribal council, and might later be asked to become chiefs. Even then their power was advisory rather than despotic. The real force behind Mandan government was public opinion, which encouraged the people to be loyal and useful.

Personal prestige among Mandan men, especially the younger ones, derived mainly from displays of bravery or skill in hunting or in war. Warfare on a tribal scale was rare. But sometimes, perhaps after the excitement of a successful bison hunt, the younger warriors began to grow restless in the quiet Mandan villages. They then chose a leader and slipped out quietly into the wilds, each carrying extra moccasins, a war dress, paint, and weapons. The usual weapons were a stone-pointed lance, a bow and a quiver of arrows, and a swinging club with a stone head. Their aim was to find a village of another tribe, attack it at dawn, and bring home as many scalps of dead men as they could, together with a number of captured women and children. If they were successful they would paint their faces black, and then return home singing their war chant and carrying long sticks decorated with the scalps of their victims. Such raids were small-scale affairs, but they gave young men an opportunity to win fame by being first to touch an enemy, or first to seize a prisoner. There were many grades of daring, all carefully calculated and recorded like sporting scores, and they counted in deciding who would be chosen as chiefs in later life.



The nineteenth-century American artist George Catlin did a series of drawings of the *Okipa* ceremony. His version of the Bull Dance shows the ceremony in its early stages.

On the occasion of the *Okipa*, men asked special blessings and paid in advance, as it were, by special suffering. The warriors (right) submitted voluntarily to the agony of being raised by throgs inserted through the flesh and turned until they fainted.



On fainting, the warriors were lowered to the ground. Then, in the "last race" (above) they were dragged along by two men until splints holding trailing bison skulls to their lacerated muscles tore through the flesh.

Six participants in the *Okipa* ceremony. From left to right they are: A Bison Bull before donning his hide; a Night figure painted with white dots to represent the stars; a striped figure called Morning Rays; a Bison Bull in full regalia with a bundle of willow boughs on his back; the Evil Spirit; and a "dragger" who pulls the initiates in the "last race."





An important feature of Mandan social organization was the system of societies, or religious clubs, that were graded according to the ages of members. When young boys were old enough to have acquired some property, such as arrows or hides, they would hand these to members of the youngest age group of a particular society in order to purchase membership of the first grade. In return, the boys received the costumes of the society and were taught its songs and dances. Each grade sought in the same way to buy out the members of the grade above it, until the oldest men in the highest grade were replaced, and retired from the society. The Mandans are believed to have had ten such grades in each society, its members spending about four years in each grade.

Each society was concerned with a particular aspect of Mandan life. The Dog Society was for the warriors. The Bull Society (and its female equivalent, the White Bison Cow Society) was concerned with bison hunting. Other societies were devoted each to its special activities. The religious element of the societies was expressed in ritual dances and chants to encourage success in war, or hunting, or the gathering of the harvest. Each village had two informal chiefs, one for religious ceremonies, the other for peacemaking.

The greatest ceremony of the Mandan year was the *Okipa*. Unlike Hopi ceremonies, it was organized not by a religious group but by an individual elder seeking prestige, and might lead to his becoming a chief. The sponsor had to be wealthy for he paid, in food and gifts of robes, for all the work necessary to make the four-day ceremony a success. A great tent was erected in the center of the village where stood the trunk of the sacred cedar, representing the spot where the Mandans' first ancestor arose from the Earth. Here were performed a series of ritual dances that dramatized the creation of the Earth, of people, plants, and animals, and the history of the Mandans. By commemorating these events the Mandans hoped to ensure general good fortune for the tribe.





Bison were vital to the prosperity of the Mandans. They not only yielded large quantities of meat, but their skins, horns, and bones were used to provide clothing and weapons.

Before they obtained horses, Mandan braves would encircle the last section of a bison herd and pepper it with arrows from all directions.



Young men wishing to ask for special blessings on this great occasion had themselves hung up from poles by thongs attached to their bodies through slits made in their chest or back muscles. Others trailed behind them bison skulls tied to holes cut through their calves. Such deeds were much more than exhibitions of bravery and endurance. They were an offering of personal suffering to the gods, and a means of obtaining visions.

The Bison Hunt

Autumn was the time of the bison migrations, and there was always a chance that a big herd would cross the tribal hunting grounds. As the time of the migrations drew near, members of the bison societies held their most important dance of the year. Dressed in bison skins, complete with heads—a heavy and uncomfortable garb—they danced around in a ring, waving spears and rattles. The idea was to offer their discomfort as a sacrifice to the spirits, and to beg them in return to bring the herds near the village.

In a few days, with luck, clouds of dust raised by an immense herd of bison would be seen on the horizon. The tribe was immediately organized as if for war. Scouts disguised in wolf skins, and keeping downwind from the herd, were sent out on reconnaissance. When they had made sure of the size of the herd and the direction in which the animals were traveling, they hurried back to the village to advise on how the hunt should be planned.

First a file of hunters with spears, bows, and quivers of arrows set out at a steady run. They would get into position near the herd, but remain hidden in the long grass until all but the last fifty or sixty animals had passed. Then they would leap from cover, shoot as many bison as they could, and break in among the herd, waving their arms and shouting, in order to separate the rearmost animals from the rest. This was dangerous, since these animals might stampede and trample the hunters underfoot. If all went well, however, the separated bison were driven until they were running in a circle. Then they would be picked off one by one with arrows or spears.

When as many as possible had been killed, the hunters stripped off the skins and carved up the meat. Nothing was wasted. By the time the women and boys arrived from the village with the dogs, the meat was bundled up in lumps and placed on the skins. These would be loaded onto the *travoise*—wheelless carts made from two long sticks harnessed to the shoulders of dogs—and dragged back to camp. Back at the village the meat was divided. Each hunter had



Sometimes hunters broke into a herd to separate the animals, which were then picked off individually. This dangerous method was most effectively used after the Mandans had acquired horses from the white men.



There were various ways of catching bison. In one, hunters would drive the herd into a corral along a narrowing path they had staked out. Once they had succeeded in getting the animals through the entrance, killing them was simple.

a right to the heart of the animal he had been the first to strike with arrow or spear. He took special parts of it to present to the chiefs and the members of the council. There were also choice steaks reserved for the men who had helped organize the hunt but had not been able to take part in the killing. Other cuts were presented to the old and helpless members of the tribe.

Outside each lodge were racks made of thin poles and saplings. These were used for drying meat. After a hunt they were loaded with strips of thinly sliced bison flesh, which were smoked by small fires beneath the racks. Children were on duty all the time to keep dogs and birds away until the meat was properly hardened. Then it was packed in big hide bags that were hung in the lodge until the meat was needed.

Handicrafts

The skins of the bison came to the women and girls for preparation. First they took awls made of bones from deer legs and stabbed a row of holes all around the edge of each great skin in order to attach it with leather thongs to a strong framework of poles. When the hide was on the frame they took up their big scrapers made from bison leg bones fitted with a smaller bone blade with a serrated edge. With these they scraped every trace of flesh off the hide. Next they propped the frame over a pit in which they had lit a fire of tree bark. The smoke helped to dry and preserve the hide. Finally they turned the hide over, pegged it out on the grass, and rubbed it with fat and a small quantity of bison brain to make it pliable. It took a long time to prepare the hide but the result was an article that was weatherproof, flexible, and warm. The same treatment was given to skins of deer and smaller animals. Sometimes they were wetted and allowed to rot awhile, so that the hairy side could be scraped and cleaned. These soft, thin skins made beautiful skirts and moccasins.



Robes were often painted as well as embroidered, to depict the wearer's heroic deeds in battle. At the top is a painting by the Mandan chief Four Bears (in feathered headdress) celebrating his victory over a Cheyenne chief. The drawing shows women decorating a bison skin.

Mandan pipes and bowls. The stems are from two to four feet long and made of the stalk of the young ash. The pith of this wood is easily removed. The bowls are carved from red stone.





The fine clothes of these two proud warriors are evidence of the care that the Mandans lavished on their appearance. Brightly colored embroidery on the soft bison robes and moccasins was done by women using dyed porcupine quills.



Horse racing was enthusiastically adopted by the Mandans, who were keen gamblers as well as expert horsemen.

Shooting match with bows and arrows. The winner was the man who was able to keep the most arrows in the air at the same time.



Decoration of the clothes was also a job for the women, who took a great pride in their porcupine quill embroidery. Quills taken from young porcupines were split with flaked stone knives, and divided into long slender shreds. Then they were cleaned and put into a pot of simmering dye made from various roots, barks, or lichens. Together with cleaned white quills they were sorted into groups. Needles made from bird bones were used to prick the pattern through the soft leather. Each stitch of quill work was pushed through by hand and bitten tight to bend it into position. Most of this embroidery work was done on men's clothes.

The men were most proud of their own decorative skill. They painted their shields with protective spirit symbols, and their clothes with colors and designs that marked their social status. Robes of bison hide were painted with the men's personal histories. The pictures were drawn in black dye with a stick that was pressed into the surface of the robe. Then colors, made from vegetable dyes or ocher, were mixed and painted in by using sticks with the ends chewed into stiff brushes. In the summer, when the men wore the robes with the fur inside, everyone could see the symbols of their battles—how many enemies they had slain and scalped, how many hunts they had directed, and how many dog teams they had captured. Sometimes, too, the paintings showed their visions of the spirit world. If any of these paintings told a false story its owner would be scorned and disgraced, for the people had no room for a boaster or a liar within the tribe.

Winter Migration

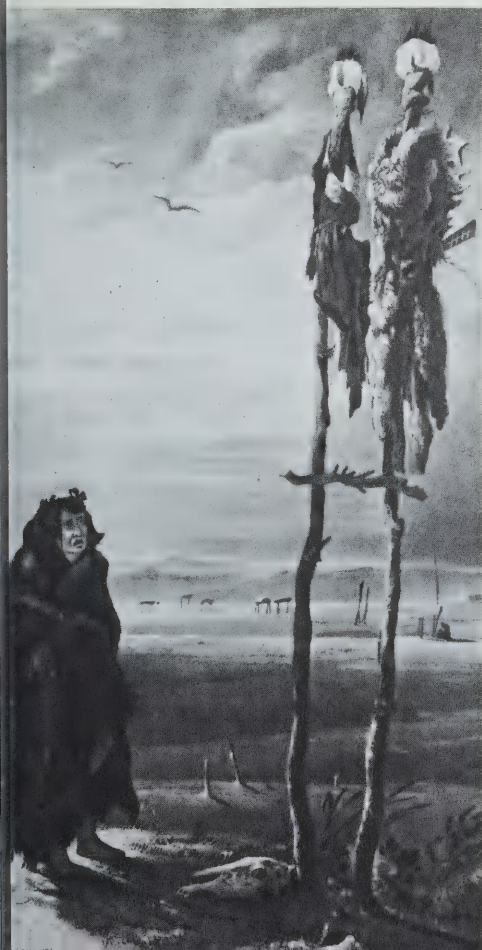
As the hard weather set in and snow covered the land, Mandan villagers journeyed southward to their winter camp. This was similar to the summer village, but had smaller, cosier, lodges, and was set among woods fringing a river. Here there was shelter from the bitter winter winds, a plentiful supply of firewood, and the occasional small animal such as fox or beaver to provide them with fresh meat.

The date of the move was determined by a meeting of the chiefs who watched the weather and the animals and so knew when the time was ripe. As much as possible was packed onto small sledges and the stick travoise drawn by dogs. Then the whole village set out on the long walk, the men carrying their weapons, the women carrying their babies and some household utensils.

When they arrived at the winter village every family found its old house and set to work cleaning and clearing. They



Above: A Mandan cemetery where the dead were wrapped in blankets and laid on trestles. When the bodies had decayed, the skulls were placed in a circle around two buffalo skulls and two "medicine poles." Below: A woman lamenting by two "medicine poles."



put in new furnishings and made everything as comfortable as possible for the hard days ahead. At times, if hunting was good, the women would go out to bring in the game. They also knew where to dig for roots. But their main concern was to care for the stores of corncobs from the summer fields. Some cobs were dried carefully and hung in bunches inside the lodge. Some were ground into flour and packed away in skin containers. But most of the corn was beaten up with fat into cakes. Dried meat was also beaten with fat, together with various dried berries which helped to preserve it and give it a pleasant flavor. This made nourishing pemmican, and helped keep the people alive during the worst mid-winter cold, until the hunters could venture out to find fresh meat. After four moons had passed, the people made the long return journey to the summer village, and the annual cycle would begin again.

Destruction of the Mandans

You will recall the rebellion of the pueblo peoples in 1680. One of its effects was the liberation of thousands of horses from the ranches of the Spanish colonists. Many of these horses found their way northward via the Rio Grande valley, eastern Colorado, and Nebraska. By 1800 all of the bison-hunting peoples in the northwestern plains had become skillful horsemen. Mandan and other hunters could range over a far greater area in search of the bison and no longer had to rely on the herds' seasonal migrations through their territory. This increased mobility—with many hunters away for several months—lessened dependence upon the settlements and carefully tended crops.

But mobility had its drawbacks. In the first place, as with the Tehuelches, traditional territorial hunting rights were soon pushed aside as each tribe rode farther and farther afield. As a result the Mandans and other tribes often went after the same herds and became embroiled in savage disputes over their right to hunt in particular areas. Secondly, far-ranging travels on horseback brought the Mandans into touch with European settlers farther east. The Mandans' skill as middlemen enabled them to establish a lucrative trade in European goods with other, less sophisticated, tribes. But eventually their dealings with the white man led to the almost complete destruction of the Mandan tribe. In 1837 some of the tribesmen caught smallpox from the settlers and within a few weeks the Mandan population of some sixteen hundred people had been reduced to thirty-one. The survivors were absorbed by several related neighboring tribes, and Mandan society had gone forever.



In the heart of the Ituri Forest in the Congo, a Pygmy encampment merges into the surrounding trees. The Bambuti are nomads and remain in one spot only as long as the hunting is good there. Then they move on to a new part of the forest, where they make themselves a new clearing and new huts.

The explorer H. M. Stanley, whose party is seen in this drawing, reported seeing Pygmies from time to time as he traveled on foot across "darkest Africa." He discovered much that was new about their life.



3 LIFE IN THE TROPICAL FORESTS

Bambuti of the Congo

As we move northward or southward from the temperate zones toward the equator, the climate becomes hot and humid all year round, and the vegetation becomes progressively richer. Finally we reach the tropical forests, the richest areas of plant life on earth.

In Africa, tropical forest extends from the west coast to the center of the continent in a vast tract covering a million square miles—the Congo forest. This is the home of the Pygmies. At present there are thought to be about fifty thousand of them in the whole Congo. The Bambuti are a group of Pygmies, numbering about thirty-five thousand, who live in the Ituri Forest of the northeast Congo.

The first records of Pygmies date from 2500 B.C., when Egyptian explorers discovered them in the region of the Upper Nile. The Egyptians admired their singing and dancing and took some back to Egypt as performers. After that time, however, the Pygmies were gradually forgotten by civilized peoples, and even as recently as the sixteenth and seventeenth centuries A.D. they were regarded as mythical beings. Even Stanley's accounts of Pygmies in the 1870s were discounted by otherwise sensible people. Not until some years later was their existence finally proved beyond question.

Pygmies are of Negro origin, but are much smaller than other peoples of Negro stock. They seldom grow to be more than four feet eight inches tall and an adult man weighs about eighty-eight pounds, compared with an adult of the neighboring Bantu Negroes, who might weigh one hundred and fifty pounds. It could be that the Pygmies are descendants of taller and heavier people. Their small size may be the result of the inbreeding that occurs in several isolated areas, such as the Congo forest, the Malayan jungle, and the



Principal weapon of the Bambuti is the bow and arrow. Tipped with poison from *Strophanthus* plants, this weapon is effectively used against the creatures of the forest.

Straddling the Equator across the heart of Africa lies the Congo rain forest, home of the Pygmies.





Andaman Islands. It may also be a natural adaptation to forest life. In the dense forest a small person can hunt more efficiently, and escape danger more readily than a big one. Small people would therefore be more likely to survive, and would produce small descendants.

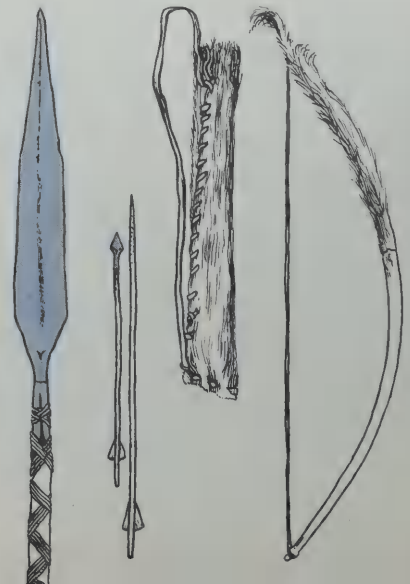
Life in the Forest

The Bambuti, many of whom still live as they did before white men first visited their land, are nomads. In bands of up to twenty-five families they roam about the forest, slipping easily through the tangled undergrowth, climbing trees with great agility, and living almost entirely on what they can find. The men go hunting under the leadership of the most skillful hunter, while the women and children gather mushrooms, nuts, edible roots, and fruits.

When they find a section of forest that promises good living, they settle for a while and make a temporary camp. A small patch of forest is cleared, and then the women set to work to make houses. They take a number of long, thin saplings and bend them over, braiding them together at the top to make a dome-shaped structure. The sides are then tied with strands of creeper to which layer after layer of big forest leaves are added like a thatch. An entire camp might consist of six or seven such huts. Inside each, a piece of wood is placed as a seat, and a couple of beds are made by placing a number of straight poles side by side to keep the sleeper off the ground. When the hut is finished, the men make a

Pygmy women show considerable skill in creating dome-shaped structures out of saplings, and roofing them with leaves (above). Meanwhile their menfolk set out to hunt for food (top right) armed with bows and arrows, spears, and game nets.

Pygmy (right) gathers honey using a honey adz. At lower right, a pitfall is prepared, to catch a large animal such as a buffalo. Pygmy weapons (below) include, left to right, the metal-tipped spear, arrows, quiver, and bow.





smoky fire in the middle of the floor to keep away mosquitoes.

When the band has used up the animal and vegetable resources of a particular section of forest, it moves on to another section. This is a relatively simple matter, for the few possessions that the people own are easily carried to the new site. The men pick up their small bows and arrows and their spears, and they may also carry the large nets used for trapping animals. The women bring pots, skin bags, and small nets made of creepers for carrying food. They also bring the most important commodity—fire. Before leaving the old homestead one of them will take a burning stick, and as the band moves through the forest she exercises great care to keep it lit.

The protein content of Bambuti diet is obtained from animals and birds. Two hunting techniques are used. One is to drive animals such as antelope into pitfalls or into long nets made of creepers. The other is to shoot them with spears or with small bows and arrows. The Bambuti, like primitive peoples in many parts of the world, have discovered how to tip their arrows with poison. They obtain a black paste from plants of the *Strophanthus* genus. These forest plants contain a drug that affects the heart muscles of animals. This has no harmful effect when eaten. But when introduced directly into the bloodstream it overstimulates the heart, producing a condition of “cramp” that quickly leads to death. In the case of larger animals death is slower.



In exchange for iron, the Bambuti perform services for neighboring Bantu tribes. Above: A Pygmy woman helps to pound corn outside the forest. Below: Bambuti men roofing a house. The type of building differs from that of the Pygmies.



On rare occasions, an elephant strays into the hunting grounds and a “David and Goliath” act ensues. The Pygmies chase the elephant and pepper it with spears and arrows in an attempt to kill it.

Relations with the Neighboring Bantu

Almost everything the Pygmies need in the way of weapons and implements comes from jungle materials. There is one exception: their arrows and spears are tipped with iron. This they are able to obtain only because of the unusual relationship they have developed with the taller Bantu Negroes, who live outside the forest. These Bantu make use of the forest in quite a different way from the Pygmies. They would never consider penetrating deep into it and making clearings. In fact, their attitude to the forest is one of fear, even though they do not hesitate to destroy its fringes in order to clear new ground for growing crops. Yet the forest provides meat, animal skins, ivory, and feathers, which the Bantu want and which they can obtain most easily from the Pygmies. So in exchange they offer the Pygmies iron implements and the surplus of their agricultural crops.

This relationship between the Bambuti and their Bantu neighbors has existed for centuries. It is an example of a phenomenon called economic *symbiosis* (Greek for “living together”). Each group is dependent on the other for part of its economic needs, and each benefits from the special skills of the other. Thus the Bantu do not need to enter the forest to obtain meat, on which they rely for protein. And the Bambuti do not need to grow crops or to develop ore-smelting techniques. Nevertheless, the arrangement is slightly one-sided, for the Bambuti must always emerge from the forest to trade with the Bantu, while the Bantu never penetrate into the forest.

Besides bartering with the Bantu, the Bambuti perform services for them and submit to them by taking part in some of their religious ceremonies. They even allow the Bantu to arrange their marriages, but they do this in a spirit of flattery and fun. They realize the advantages to be gained from pleasing their “masters.” At heart, however, they dislike the larger Bantu and after their brief meetings for trade and ceremony are finished, the Bambuti slip back into the forest. There they forget all about these ceremonies, for they have marriage customs of their own.

Group Life

Bambuti bands are small and their organization is informal. The leader is a successful hunter. Each band consists of two



Pygmies are fond of music and dancing. Here a party—consisting of a number of families totaling two or three clans—gathers in the village clearing to listen to a drummer beat out complex rhythms on the big drum.



A Bambuti women's dance. The watching girls clap out a rhythm, while the performer skips through a rope held by another woman.

After a successful hunt there is a celebration dance, in which the death of the animal is re-enacted (below) in front of the women and children of the village.

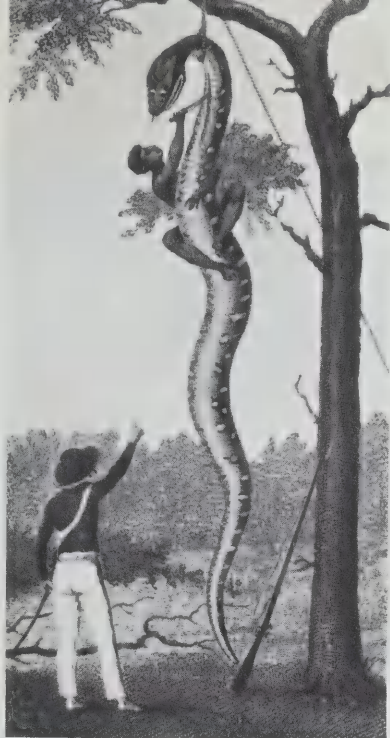


or three clans made up of a number of families, all the members of which are descended from the same great-grandfather. It is forbidden for a Pygmy to marry inside his own clan—a rule that serves to tie the family units together.

The Bambuti are a friendly people, much given to song, dance, and merrymaking. After a successful hunt they dance in celebration, miming the exact way the prey was tracked and killed and its final death throes. If the hunting is poor they try to “wake up” the forest by increasing their singing and dancing. Their sense of worship toward the forest is vividly shown by their practice of offering to it the first fruits of any successful hunting. Whether it is part of a honeycomb, fruit from a tree, or the first cut from a captured animal, it is always thrown to the forest in gratitude.

Modern Influences

In 1885 the Congo was taken over by Belgium, but the Pygmies were left to themselves and no laws were applied to them until the 1950s. Then the Belgian administration attempted to get the Pygmies to settle down to an agricultural way of life and to provide labor for building roads through the forest. This policy gradually reduced the number of truly nomadic Pygmy bands. More and more were attracted to the spots where they could earn a meager wage and buy their food instead of having to hunt for it. Then, in 1960, came the Congo revolution and the end of Belgian control. It is probably true to say that the Pygmies suffered less than many Bantu tribes during this period of anarchy, as they could easily retreat into the forest. However, the long-term effects have yet to be seen.



An imaginative drawing, made in British Guiana in the 1790s, shows a giant anaconda, still writhing slightly after death. The British settler who shot it stands below.

Sir Robert Schomburgk's party, traveling along the Essequibo River, were among the first strangers to come upon the Wai-Wais. Here the group is seen briefly encamped while the porters negotiate a common obstacle—rapids.

Wai-Wais of Guiana

Between the Guianas and the Amazon basin, the great South American rain forest covers a mountainous region called the Serra Acarai. Here there is more variation in weather than in the Ituri rain forest of the Congo. There is a dry season, which in most countries would be considered extremely wet, and a rainy season which is even wetter. The alternation of seasons, together with the hilly terrain, causes sudden changes in the level of rivers. Much of the low-lying forest is liable to be inundated.

In this region the forest has grown up over a jumbled mass of rocky substrate. The soil consists of decomposed rock that, when mingled with the products of forest decay, is extremely fertile. What is needed, however, is a protective cover of vegetation to prevent soil nutrients from being washed away. But after trees are felled and the soil is directly exposed to the rain, it soon loses its fertility and becomes, as one recent explorer puts it, "as sterile as a heap of bricks." The climate is at all times humid, hot by day and



often quite cold at night, despite the fact that these forests are almost on the equator.

One of the many tribes that inhabit this area is the Wai-Wais. There may now be under two hundred Wai-Wais left in existence, partly in the southeast of British Guiana, and partly over the border in northern Brazil. Our first knowledge of them comes from reports of explorers of the early nineteenth century. Although the coastal regions of the Guianas were visited by Europeans from the end of the fifteenth century onward, a great many years went by before there was any deep penetration inland. However, on the Brazilian side of the border, there was some inland penetration, mainly by Portuguese prospectors who conducted raids on Indian villages to take slaves. At the same time European diseases, to which the Indians had no immunity, devastated the forest lands. Deaths from smallpox, tuberculosis, and influenza depleted the numbers of many tribes and wiped out some altogether.

These events were to have their effect on the Wai-Wais. One of the first Europeans to give any account of them was the British explorer Sir Robert Schomburgk, who visited the border country between British Guiana and Brazil in



The mountainous rain forest of South America. The Wai-Wais live just north of the Equator, in British Guiana. Right: A Wai-Wai family. Although the man is decorated with necklace and earrings, there is nothing effeminate about him.

The explorer Nicholas Guppy took these photographs of Wai-Wai braves. Below left: A man named Churuma proudly displays his beadwork pigtail tube and colorful plumes. Below: Bird down clings to his oil hair.





1837. The Wai-Wais were then living south of their present territory, near the Canerau River, a tributary of the Essequibo River. Meanwhile, another tribe to the north of them was decreasing in numbers. In the twentieth century that tribe became totally extinct, and the Wai-Wais took over their territory, moving northward to the area they occupy today.

The Wai-Wais are a stocky light-skinned people. Like all American Indians, from Alaska to Patagonia, they are descended from Mongoloid people who filtered from north-east Asia into the Americas thousands of years ago. Like many other Indian tribes, they are fond of bright colors, and their clothing, although basically simple, is highly decorated. The front and back flaps of the loincloths that the men wear are fringed with bright seeds and toucan feathers. The Wai-Wais paint their faces and bodies with sweet-smelling red and black pigments. They wear their hair long, in a silky pigtail that is partly enclosed in a cane tube decorated with beautiful bird skins. Legs and arms are decorated with tight cane bangles. Contrasted with the less decorative Pygmies, these people show a strong sense of enjoyment of color and ornament. Perhaps, too, they share the feeling,



Above: Dancing dress for the cassava harvest festival. It is made out of strips of palm leaf hanging from a crown of egret, harpy-eagle, and parrot feathers, and conceals the identity of the wearer.

common to many cultures, that the human body needs the added interest of artificial adornment.

Cassava Growing

The habits of primitive peoples are closely tied up with the food they eat. We have seen that the Bambuti, even though they exchange forest products for cultivated vegetables, are primarily meat-eaters. Since they have no flocks or herds and no extensive grazing grounds, this means that they are hunters and nomads. The Wai-Wais, on the other hand, live chiefly on a vegetable diet. Their most important occupation is growing cassava, a plant that stores up its food supply in starchy tubers, like a potato. (Cassava reaches us in a refined form as tapioca.) Like any crop, cassava must be tended, kept free from weeds, and finally harvested. These activities prevent the Wai-Wais from being nomadic, even though they supplement their diet by hunting and fishing. Having selected a piece of forest land above flood level, they fell the trees to let in sunlight, burn the smaller branches and leaves, and plant cassava tubers in among the fallen tree trunks. The ground thus roughly cleared can be used in this way for three or four years. Then it becomes exhausted, because of the crops that have been taken from it and also because the exposed soil has been washed away by heavy rains.

For a period of three or four years then, the Wai-Wais stay in one place. Thus it is worth their while to construct a semipermanent dwelling. The entire community, numbering up to fifty, shares a single structure called a *maloka*. It is a conical building constructed with an inner framework of slender tree trunks, walls of bamboo screen, and roof of leaves. Although the entire village lives under one roof for security and companionship, each family has its own fire. It is considered unlucky for one woman to share her cooking fire with another. The Wai-Wais sleep in hammocks slung one above another between the timbers that support the roof. The mother of each family sleeps at the lowest level, and one of her duties is to keep the fire going. This usually requires her to reach out in the middle of the night and put fresh fuel on the embers. Personal possessions, ornaments, and whatever small reserves of food there may be, such as cassava tubers and smoked meat, are stored in the rafters.

Archery and Poisons

Prominent among the inhabitants of the communal hut are the hunting dogs, which are kept tethered on shelves. It is possible that these dogs, which look like small slender



A Wai-Wai village. Conical in shape, the single large house shelters the entire community and stands in the center of the clearing that has been made in the forest.

The house is constructed with an inner framework of slim tree trunks. The walls are of woven bamboo and the roof is made of leaves.





foxhounds, are descendants of dogs owned by the Portuguese coastal settlers of the sixteenth century. They are, therefore, a relatively recent acquisition.

When men of the Wai-Wais go hunting, they rely mainly on bows and arrows to kill game. These weapons are much larger than those used by the Pygmies, and are worthy of special mention. It is commonly taken for granted in Europe that the English longbow (which was decisive against armored cavalry at the medieval battles of Crécy and Agincourt) was the last word in "stick and string" artillery. But in the South American forest we find the Wai-Wais fashioning and using bows up to eight feet long (compared with the English six feet) and arrows five feet or more in length (compared with the English three-foot shafts).

The combination of big bow and long arrow gives great range. But to ensure that the arrow will fly straight calls for some ingenuity. At the tail of the arrow-shaft of cane, the Wai-Wais fix three feathers, each twisted a little. This has the same kind of effect as the rifled barrel has on a modern artillery shell. It causes the projectile to spin in flight and so prevents it from tumbling over and over.

Wai-Wai arrows are fitted with detachable tips originally

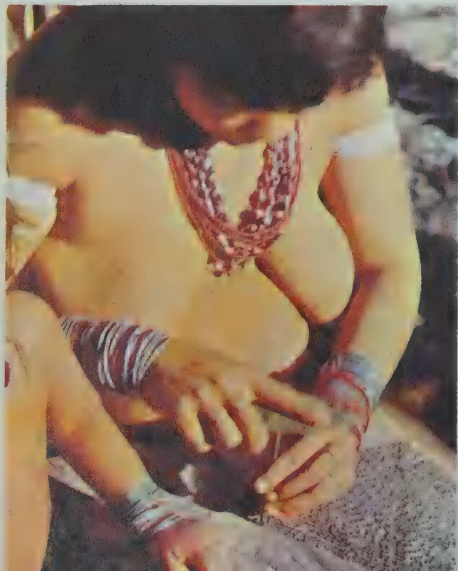
Inside the communal house each family has its own fireplace, around which it eats, sleeps, and stores its goods. Also present are the hunting dogs, which are kept on shelves above the level of foot-burrowing jigger fleas. These dogs are highly trained and valued property. Below: A gaily decorated girl with two puppies.





Proud young hunter with his kill, this Wai-Wai youth displays his prize—a forest peccary. His longbow, a head taller than himself, calls for immense strength and accurate aim.

Cassava graters are made by hammering sharp little flakes of stone into a wooden board, finally securing them with latex. Wai-Wai women are able to produce a surplus of graters, which are traded with other tribes. Detail: A lizard motif on a grater.

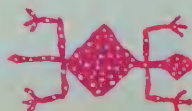


made of wood but nowadays of metal slotted to fit the arrow. These “warheads” are coated with a gummy substance containing the deadly poison *curare*. The tips, which are variously shaped for use against different animals and birds, are too dangerous to carry exposed on the end of an arrow. They are kept in a separate small quiver and fixed on to the arrow only at the last moment. They break away when the animal is hit, and the arrow is retrieved for further use. Unlike *Strophanthus*, the Pygmy arrow poison, curare affects muscle tissues other than those of the heart, causing paralysis. Although the heart may continue beating, the wounded animal quickly dies of oxygen shortage because its breathing muscles cease to function. We owe the South American Indians a great deal for discovering this herbal poison. It is now widely used in surgery to produce relaxation of the patient’s muscles during an operation. The heart is little affected, and artificial respiration takes the place of natural breathing.

Another poison, which the Wai-Wais use for catching fish, comes from a vine. Vines are gathered, beaten to shreds, and then stuffed into flexible baskets. The Wai-Wais dip and squeeze these vine-filled baskets in a stream. A milky fluid runs out and asphyxiates the fish. Then the men jump into the stream and throw the fish onto the bank. Fish caught by means of this poison, like game killed with the help of curare, can be eaten without ill effects.

Cassava plays a big part in the life of the Wai-Wais. Even their staple food, cassava, in its raw state, is highly charged with hydrocyanic (or prussic) acid. It is interesting to speculate on what happened long ago when a family of South American Indians first shared a meal of cassava, and to wonder if any of them survived the disastrous experience. It is even more interesting to speculate as to how anyone else dared to repeat the experiment, and how, eventually a diet of cassava was made safe.

However, today the women of the Wai-Wais handle cassava confidently. First they grate the tubers into a mash on a special grater, made of a wooden board into which hundreds of tiny sharp stones have been hammered and secured with latex. This natural gum is obtained from certain species of trees that are found in the region, by cutting the bark and collecting the sap. Then they pack the mash into a kind of basketwork tube, with two loops at the top and one strong loop at the bottom. The top loops are hung onto a rafter in the maloka, and a long pole is thrust through the bottom loop. One end of the pole is tied to a house post at





Before planting, the Wai-Wai clear the undergrowth in an area of the forest and fell the trees. The area is burned over and then crops are planted with the help of a digging stick. In the picture above, silk grass, used for making string and rope, is being planted. In three years' time, the soil will be exhausted and a new clearing will be made.



Right: Near a village, *Capsicum* peppers provide a useful condiment. In the background stands a fine crop of sugar cane.

floor level, and a woman then pushes the other end of the pole downward. This leverage stretches and elongates the tube containing the cassava mash and so squeezes out the juice that contains the poison.

The fresh juice is deadly but the Wai-Wais do not throw it away. Instead they neutralize the poison by boiling the juice with wild honey. It can then safely be used to make a tasty sauce called cassareep. The cassava flour, made from the mash, is now also safe to use. The women knead it with water into thin flapjacks, and cook it into a kind of light bread on a hot flat stone. Wai-Wai diet, then, consists of cassava bread, roast fish, fruit and nuts from the forest, and occasionally the meat of birds and forest animals.

Growing up in the Forest

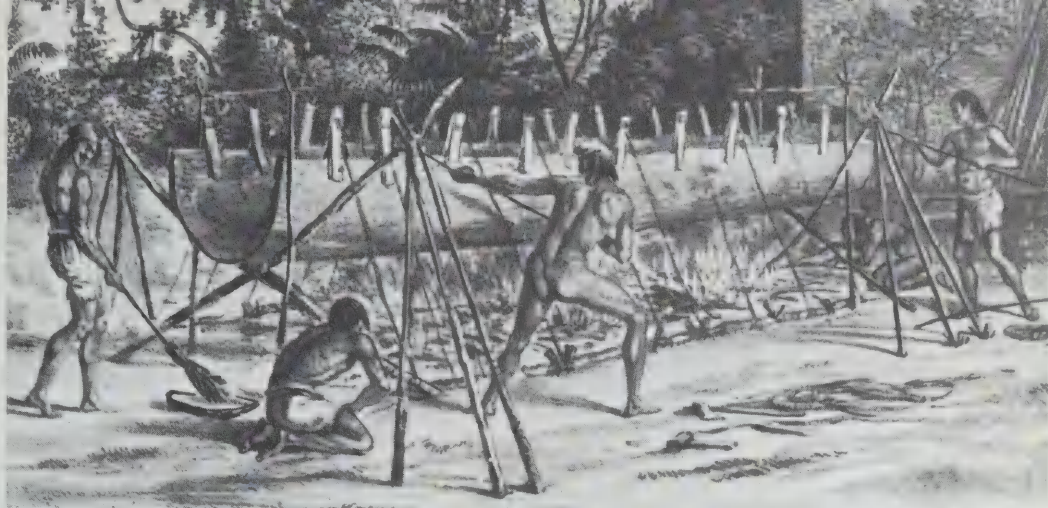
Wai-Wai children begin to take a part in the working life of the community at an early age. Even though they may cry for milk from their mothers until three years old, they are by then able to take out the half-wild dogs and to carry small packs on their backs to and from the fields. They quickly learn to swim and climb the tall forest trees, and to be alert for dangerous animals. In the river they watch out for the cayman (a kind of tropical American alligator), which can be detected by its telltale eyes peeping from the water.

As they grow older, the children help by carrying firewood, and boys make themselves small bows and arrows. These arrows are cut from a special kind of grass, and are feathered in the same way as the larger arrows used by the hunters. With constant practice, the boys become expert marksmen before they are big enough to handle the big Wai-Wai bows. Soon, too, they are ready to handle simple tools.

Before the introduction of metal, which the Wai-Wais now obtain in exchange for their cassava-graters, the people had to be content with tools made from stone. Their rain-forest home contains no metallic ores. These stone tools included hatchets, with heads of polished stone set into sturdy wooden handles. However, tree-felling, so necessary for clearing cassava patches, was arduous work with these hatchets. So the Wai-Wai brought down big trees by lighting fires around the base and then hacking away the charred wood until the tree crashed down. Their only other tools were sharp-edged stone blades, which they used as knives, and small flakes without a handle, which they used for shaping bows and arrows, and for hollowing out and shaping canoes. For all these tasks the Wai-Wais now use metal knives.



A love of pets is characteristic of the Indians of South America, and the Wai-Wais are no exception. The diet of cassava is largely responsible for the child's potbellied appearance.



Canoe-building

Canoes play an important part in the life of the Wai-Wais, and not only for traveling along the rivers. During the rainy season, the area that they have selected for cassava crops and for the communal maloka may become surrounded with floodwater. It then becomes urgent for them to move about in search of game and fish.

Wai-Wai canoe-building is a major operation. It calls for the combined skill of at least a dozen men, not to mention the continual attendance of the *piai*, or medicine man. First a tree, felled within easy reach of the river, is trimmed and shaped to the external hull form by burning and scraping. The inside is excavated by the same methods until the trunk has the shape of a hollow cylinder, with walls an inch thick and with a narrow opening along the top. Next comes the critical operation, which is to open up the cylinder into a straight-sided vessel. The Wai-Wais build a line of carefully regulated fires, and, rotating the hull on trestles, they "cook" it all over, inside and outside. This cooking of "green" wood has the effect of softening it.

Meanwhile other members of the party have prepared levers in the shape of huge clothespins, three or four feet long. They slip these over the thin sides of the hull and, with tremendous effort and continual reheating, they slowly lever the sides apart. Every fraction of an inch gained is held by bracing the inside with crosspieces. At any moment the canoe may split from end to end. So while the builders toil, the prayers of the *piai* and the brandishing of his magic rattle grow more urgent. At last the leader of the party decides that it would be too dangerous to open the hull out any farther. The canoe is then left to cool and harden, after which the crosspieces are removed.

"Cooking" a canoe. Here a drawing of the 1820s depicts a Central Amazonian tribe using a technique similar to that of the Wai-Wais to open up the hollowed-out trunk into the shape of a canoe's hull.

The Wai-Wais use giant pegs to lever open the canoe's sides. This technique enables them to make a wide canoe from a small tree trunk.





Weaving abstract animal motifs with strung beads is done on a loom that keeps the work taut. A man's vanity basket (below) contains his most precious trinkets—beads, earrings, and feathers.



THE WINNING
OF A WAIWAI
WITCH DOCT

WITNESSING
A MIRACLE
IN WAIWAI LAND



The Wai-Wais and Their World

Primitive agriculture, hunting, and fishing—these comprise the workaday side of Wai-Wai life. But what of their social life and their relations with other tribes of the forest? So far as we know, the Wai-Wais are pleasant people, with good manners, and a natural friendliness. The fact that up to fifty people of all ages live for years under one roof tends to produce an easygoing, tolerant temperament. The women concentrate on domestic tasks, including cassava preparation and weaving. In the past they made pottery vessels of great beauty, but nowadays traded aluminum bowls are preferred. The men undertake most of the outdoor responsibilities. Yet there seems to be no very clear division of labor, and in an emergency either sex will lend a hand at most tasks. Marriage is a flexible affair. A man can leave his wife if she turns out to be tedious or lazy, and a woman has similar rights.

The Wai-Wais are almost completely self-sufficient and therefore not compelled to seek any large-scale contacts with neighboring peoples. However, they do, from time to time, engage in a simple form of barter with their neighbors. The things that the Wai-Wais are good at making, and of which they have a surplus, are freely given in exchange (either now or later) for something desirable that the other party has. In this way they can get curare poison instead of preparing it themselves, and also metal with which to tip their arrows. There is only one product that the Wai-Wais deliberately make for “export,” and that is the cassava grater.

Today the Wai-Wais are safe from slave-raiders and have greater resistance to such diseases as smallpox, tuberculosis, and influenza than they had years ago. Yet the days of their culture seem to be numbered. American missionaries moved in after the Second World War, when a makeshift airstrip was made in British Guiana close to Wai-Wai territory. Their purpose is to civilize and Christianize the Wai-Wais, but this often demands turning them into laborers engaged on commercial enterprises. As with the Pygmies, this leads to a settled way of life for the natives, but creates new and artificial “needs” among them that can be supplied only so long as they remain in regular paid employment. The process of missionizing and civilizing the Wai-Wais moves ahead, so it seems likely that before long the last traces of their own native culture will have disappeared.

In modern times, the influence of missionaries has led to the disappearance of many traditional Wai-Wai customs and beliefs.

Kenyahs of Borneo

Bestriding the equator, in the vast archipelago that lies between southeast Asia and northern Australia, is the island of Borneo. The word island suggests land of modest size surrounded by water. We should perhaps pause for a moment to recall that Borneo, with an area of about 290,000 square miles, is five times as big as England and Wales, nearly one and one-half times the size of France, and slightly larger than the State of Texas.

The present inhabitants of Borneo spring from successive waves of immigrants, chiefly from the mainland of south-east Asia. In many parts of the island there remain a few groups of primitive seminomadic hunting peoples. Surrounding them are tribes whose economy is based on shifting agriculture and rice production. And around the coast itself, beside the native Dyaks, there is a bewildering mixture of Malays, Chinese, and Europeans who mainly depend



Her earlobes weighted down by heavy metal rings, her eyebrows and eyelashes plucked out—this is a typical Kenyah girl. At longhouse parties these girls display their talents as dancers and singers.

The Kenyahs (interspersed with other tribes) live between the coastal Dyaks and the peoples of the mountainous interior.





on trade with wealthier societies in Java, Sumatra, and China.

The Kenyahs belong to the second group. They live between the coastal regions and the central highlands of Borneo. The land is entirely covered by rain forest, intersected by numberless rivers. The name Kenyahs does not describe a single, compact tribe, but is the name applied to a number of golden-skinned Mongoloid people who live in small dispersed groups in territories shared among other tribes. Although these people are distributed over a wide area in Sarawak and Indonesian Borneo, they speak the same language and have a common culture.

The Longhouse

The Kenyah economy, like that of the Wai-Wais, is based on growing food in temporary jungle clearings—in this case, rice. Perhaps because the soil is more fertile, the Kenyahs can work a single clearing for a much longer period than the Wai-Wais can, staying in one place for as long as fifteen or even twenty years. Being thus tied down, they build more durable and elaborate habitations. These are the famous

The longhouse is built by the edge of a river, which provides better means of transport and travel than the forested hills. Constructed atop a large number of supporting wooden piles, the building is fronted by a spacious veranda (above right), used for social life and storing goods. The family living spaces are seen on the left.

Some fifty men combine their strength to raise one of the main supporting poles of a longhouse. The intricately carved pole may weigh over two tons. It is raised by hauling on two great rattan cables led over a specially made framework.



“longhouses,” which are among the largest buildings made by primitive peoples anywhere in the world. Since Borneo’s numerous rivers are their chief means of transport and travel, the Kenyahs make these buildings at a river’s edge. A landing stage marks the entrance, and a steep, ladderlike path leads up to the longhouse.

This is a single-storied, leaf-thatched building raised high above flood level on a great number of stout wooden piles. The timber-plank floor is twenty feet above ground. The middle of the house frontage, which may be as much as four hundred feet long, is reached by a single long ladder. The front of the main floor forms a veranda that serves as a kind of public highway connecting all the living spaces. Behind the veranda the floor space is divided into rooms about fifteen feet deep and as much as fifteen to twenty feet wide, all screened off from the veranda.

Each family normally has a single room, and in the allocation of living space there is a clear measure of class distinction. The chief of the village has extra space in the form of two or more rooms at the top of the ladder. Then there is a social gradation along the veranda moving away from the





ladder. The person of lowest status, who may even be a slave, lives on the very edge of the community.

A single longhouse may shelter forty families, or about one hundred and fifty people. Although there are obvious dangers involved in having many fires burning in a large wooden building, each room has its own clay fireplace.

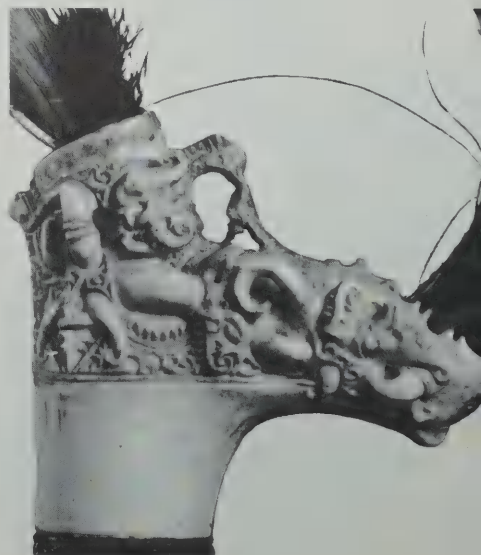
The communal longhouse, then, is a substantial building—one whose construction would be inconceivable without the use of metal tools. Shaping massive timbers calls for cutting instruments far in advance of the stone implements that the Wai-Wais depended on until quite recently. And this emphasizes one of the main differences in culture level between the Kenyahs and the Wai-Wais: the former have for centuries been masters of the art of ironworking.

Iron

Each longhouse village contains two or three men who know the arts of the blacksmith. The metallurgical “know-how” of these men is in great demand, and they are regarded with esteem by their fellow villagers.

Ore in the form of ironstone (an oxide of iron) is found as pebbles in the river beds. These pebbles are broken up with stone-headed hammers into small fragments. The process of extracting pure iron from ironstone is then similar to our present-day blast furnace technique, but on a much smaller scale. Instead of our huge brick-lined furnace the Kenyahs use a clay crucible, packing it with alternate layers of ironstone and charcoal. They do this in much the same way as

The Kenyahs take natural ore from river beds and smelt it with charcoal. They blow the mixture to white heat with the aid of piston bellows operated by hand. The pistons consist of a bunch of feathers on the end of a stick, which the operator pushes and pulls along cylinders hollowed out from stems of the wild sago palm. Forging is done with stone hammers.



Kenyah art revels in complex designs. Right: Etched sword and carved scabbard adorned with beads and tufts of hair. Above: Sword hilt carved from a deer's antler.



workers in industrial countries charge a furnace with alternate loads of ore and coke. The Kenyahs next light a separate furnace, burning charcoal in a forced draft produced by hand-operated bellows. On it they roast the crucible and its contents until they are white hot. The carbon of the charcoal inside the crucible "reduces" the ironstone by robbing it of its oxygen, so that fairly pure iron is left. When the crucible has cooled, it is broken up, in order to get at the spongy lump of iron inside. There is enough iron from each smelting to make a single sword blade, or an ax.

From then on, the treatment of the metal to make it into a steel implement is remarkably similar to modern practice. The lump of "pig iron" is heated in a charcoal fire and hammered several times, to improve its texture by what we call hot working or forging. Also (though the Kenyahs are probably not aware of this) this adjusts the carbon content of the metal on which its steely quality depends. After the metal has been forged roughly to the shape of a knife, ax, or sword, and the blade sharpened by rubbing with hard stones, it is finally tempered. The implement is heated on a red-hot block of iron. Its temperature is judged by its changes of color, and when the tint begins to change from yellow to blue it is quickly plunged into cold water. There is no essential difference between the Kenyahs' tempering technique, perfected deep in the Borneo jungle, and that of the famous medieval swordsmiths of Toledo, Spain. However, the Kenyahs have not mastered the art of welding large pieces of iron or steel together, so we find that their tools and weapons are efficient but small.

They make up for the lack of heavy implements by common sense and ingenuity. When, for example, they clear a plot of ground for growing rice, they choose a steep slope of forest land. They then clear a section of it in the shape of a triangle, with the base of the triangle near the river and the apex high up on the slope. The first stage in clearing the ground is to dispose of a heavy growth of forest trees, and this they do by playing a sort of gigantic game of bowling. They attack all the trees in the triangle with their small metal axes, whose springy handles reduce the amount of work needed. Starting at the base of the triangular patch, they cut halfway through the bottom of each tree trunk, gradually working their way uphill. This does not fell the trees, but simply weakens them. The last tree of all, at the apex, is the only one whose trunk they sever completely. This tree falls, smashing down two or three of the weakened trees immediately below it. These trees, as they fall, bring down the next three or four below them, and so on.



Kenyah girls shredding tobacco. They smoke this either in the form of outsize cigarettes rolled in dried banana leaf, or in pipes of hardwood and bamboo.

The Kenyahs frequently erect statues in front of their longhouses. These are believed to provide an abode for spirits that are called on by the witch doctor in curing sickness.



Forest clearance takes place in April, during the pause between the monsoons, when the weather is relatively dry. Useful timber is carried down to the longhouse for constructing such things as houses, canoes, or riverside jetties. The remaining wood is left to dry, and after about a month, on a day when the wind is right, the Kenyahs set fire to the whole clearing. The villagers enjoy the gigantic blaze, and the ground benefits from the destruction of weeds and from a liberal deposit of potash from the burned wood.

Agriculture and Hunting

The Kenyahs—particularly the women and children—grow small quantities of roots, succulent leaves, and spicy seeds to help out their diet. But their agriculture is based essentially on a single crop—rice. This is small-grained hard rice, not the same as the softer rice that we are familiar with, which is grown in flooded fields. Sowing takes place at a time determined by a specialist whose duty is to observe the signs of the seasons. This expert relies upon his observations of the slight day-to-day changes in the angle of the noonday sun. He uses a tall stick placed vertically in the ground and measures the length and position of its shadow. When he announces that the time is right, all the villagers, men and women, go out to the newly burned field. The men make holes in the ground about six inches apart with pointed sticks. The women follow carrying small baskets of seed and throwing three or four seeds into each hole.

During the ensuing wet season, accompanying the southwest monsoon, the plants shoot up rapidly. It is left to the women to weed the fields with hoes while the men erect fences to keep out wild pigs and other animals. As soon as the unripe grain is formed, some is collected to be eaten raw as a delicacy. Later the main harvest follows, and once again all the people go to the fields to gather the crop. This is stored in little barns, one for each family, and the harvest festival begins. An important item is the ritual mixing of a small quantity of old grain, carefully preserved from previous seasons in a special basket, with some of the new seed grain. This is believed to pass on the fertility of the rice to subsequent seasons. If the harvest is a good one, the festival continues for days with much dancing and drinking.

The Kenyahs supplement their staple diet of rice by fishing and hunting. The bow and arrow, almost universal among primitive peoples, is missing from their armory. In hunting, as in war, they depend on spears, knives and the blowpipe. The Kenyah blowpipe, fitted with sights, is a



Kenyah craftsmen make blowpipes from a special hardwood. Starting with a roughhewn shaft, they bore a hole with a chisel-ended iron rod. Then they smooth the outside and carefully bend the pipe so that when held aloft its weight, coupled with that of the spear blade lashed onto the end, straightens the barrel.

most effective weapon, seven feet long and bored out with great accuracy. The darts are made from slivers of palm rib mounted in a plug of soft pith that exactly fits the bore of the tube. Darts are coated with a poison extracted from the sap of the *Ipoh* (or *Upas*) tree. Like the Pygmies' *Strophanthus*, it acts mainly on the heart muscles of the victim. The Kenyahs kill birds, monkeys, and occasionally each other with these poisonous darts, but they never attack the orang-utan.

The Kenyahs make use of the cotton plant to clothe themselves. Cotton bushes are cultivated near their homes and the stuffy white bolls are hand-picked. The seeds are squeezed out by passing the bolls through wooden rollers. The men wear cotton loincloths, and the women knee-length cotton skirts open down the side. Not only do they spin thread and weave it into cloth on hand looms. They also dye the threads that are to form the warp before weaving begins, so that the finished woven material carries a colorful pattern. The warp threads are stretched over a frame, and sections are tightly bound with grass. The frame is then dipped into a red-brown dye, where only the unbound sections of the threads absorb the color. Next the frame is taken out of the dye, and the grass wrapping is transferred from the white, undyed sections of thread to the sections already dyed red-brown. The frame is now dipped into a blue dye that affects only the sections previously left white.

Personal decoration, too, reaches a high level among the Kenyahs. As among the Masai, the women pierce their earlobes and stretch them to fantastic lengths—sometimes until they almost touch the shoulder—with heavy bronze earrings. Men and women alike wear bracelets on both arms and legs, and most of the women have blue tattoo patterns on hands, arms, and legs. The possession of steel implements also allows the Kenyahs to express themselves in elaborate carving, both of household implements in wood, and also of images of the gods.



Envoys wearing peace masks (right) would accost strangers arriving at a Kenyah village and ask their intentions. The envoys then returned and reported to the chief.





Head-hunting

The Kenyahs have clearly formulated beliefs in supernatural powers and they believe there is a spirit in man that survives his death. This brings us to the custom for which the Kenyahs and other Borneo tribes are most famous, or notorious—that of head-hunting. Although the practice is now stamped out, every longhouse still contains a number of dried human heads. It is therefore interesting to look into the origins of head-hunting.

One of the major underlying causes was probably rivalry for land. Crops could be grown only for a few years in one spot, after which the community had to find new grounds. Naturally there were clashes with other villagers with the same problem. At such times the longhouse chiefs would meet for peace talks, but these were not always successful. The matter was then settled by engaging in warfare. This was not necessarily war against other tribes, but often war against neighboring Kenyah communities. Loyalty was confined to one's own particular longhouse (or in some cases a group of longhouses comprising a village).

In the course of time it seems that the battle for living space developed into an institution. A permanent state of war grew up between communities, and young men were impressed with the importance of taking the heads of enemies killed in battle. A head taken in battle was a badge of courage, and the head of a dead enemy was believed to carry with it the power or energy of the victim. The taking of a head added vigor to him who took it. To kill a man and take his head was also regarded as a sign of virility, without which a young man could not expect to make much impression on the girl of his choice. But curiously, the element of bravery came to be weakened. The situation arose where it was considered just as meritorious to chop down an old woman from behind with a knife as to kill a man in hand-to-hand combat. What mattered was taking a life and annexing its spiritual power.

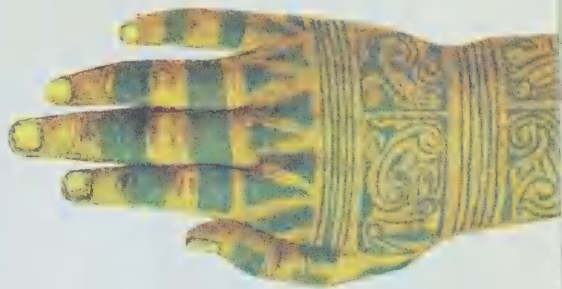
Above: A war party in the jungle. Fighting was brief, the attackers rushing on their enemy, hacking off a few heads, and returning home at top speed. The captured heads were then roasted lightly and hung from rafters in the longhouse (as at right).



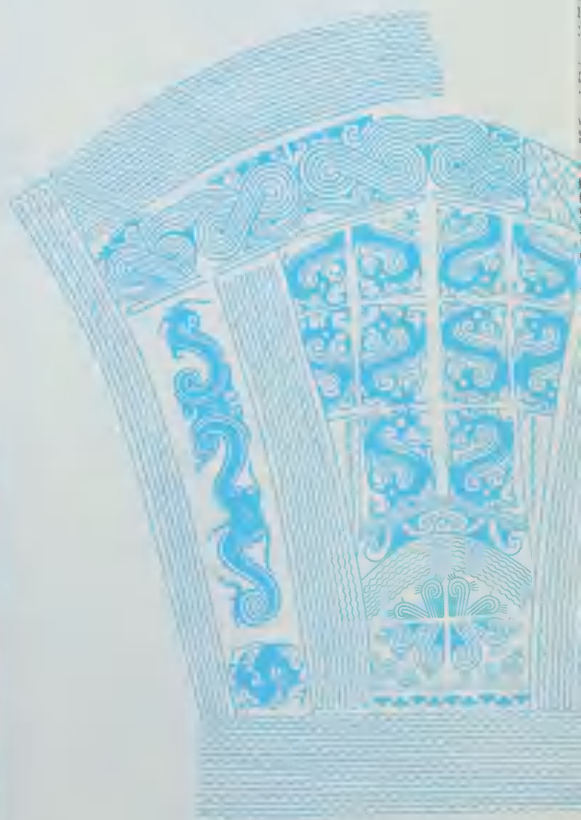
Right: A Kenyah wooden shield. The front is decorated with stylized human faces and embellished with tufts of hair from slain enemies. The back (far right) carries paintings of human figures and scroll patterns.

In olden times, beads were a form of currency. Today imported glass beads (below) are purely decorative. They are threaded on fibers drawn from pineapple leaves and woven into colored baskets.





Married women often have many tattoos. Tattooing begins early in a girl's life, with the hands and feet. Later the thighs are decorated. A typical thigh tattoo is shown below. Kenyahs believe that benefits in the afterlife come to the fully tattooed woman.





A young warrior dancing. Such dance forms reflect the nature of Kenyah society.

So we have a mixture of causes for head-hunting. First, taking life in competition for land was considered praiseworthy. Then grafted to this was the idea that killing is in itself meritorious and strengthening. Actually it seems that the Kenyahs were uneasy about head-hunting and developed myths to justify it to themselves. They say that they adopted it because a frog told a war party in a time of sickness that if, instead of simply killing people and leaving them, they brought home the heads, they would enjoy good harvests and good health. The party did so and returned to find their people cured of the ailments.

On returning from such an excursion, the captured heads were placed in a small hut specially erected for the purpose. Then the young boys underwent their first initiation in the arts of war, by striking at a head with the aid of an old warrior. At the same time the older boys underwent their second initiation, striking at the heads and engaging each other in mock battle with swords and sticks.

Another reason for head-hunting concerned funeral ceremonies for an important person. The bereaved group believed that its vigor and power had been diminished by his death. But they also believed that this deficiency could be made good by acquiring a few heads.

Today, head-hunting is forbidden throughout Borneo, and strict control measures are enforced by the Malaysian Government in the north and the Indonesian Government in the south. Nevertheless, dried human heads are still used in important Kenyah ceremonies. This is possible because the British administration, in the nineteenth century, established a series of "head-banks" from which people could hire the heads they needed for ceremonies. So now when there is an important funeral, a "war party" moves off to collect heads, and returns with a canoe-load of old ones from the local bank.

Thus to some extent the old customs linger on. Yet contact with the life and values of more advanced communities is steadily breaking down Kenyah culture. Young people move off nowadays to the coast to look for opportunities of advancement in the new culture they have heard about. Both Christianity and the Moslem religion are gradually spreading inland. But the interior of Borneo has few valuable natural resources to attract peoples of either Europe or Asia on any great scale. Thus cultural changes are proceeding slowly, and the Kenyah people are able to adopt new values and absorb new ideas slowly, with no great loss of continuity from their old way of life.

Mayas of Yucatán

In this last section on life in tropical forests we shall see something of a people whose history is vastly different from that of the Bambuti, the Wai-Wais, and the Kenyans. The Mayas of Middle America have lived through periods during which their culture could rightly be regarded as primitive—at least from the technical point of view. But they have also known times when they supported a civilization worthy of comparison with those of the ancient Mediterranean world. Here we are concerned mainly with the way the Mayas lived long after their great civilization declined—that is just before the Spanish conquistadors first arrived in the New World. But in order to understand how they lived at that period, we need to know a little about their earlier history.

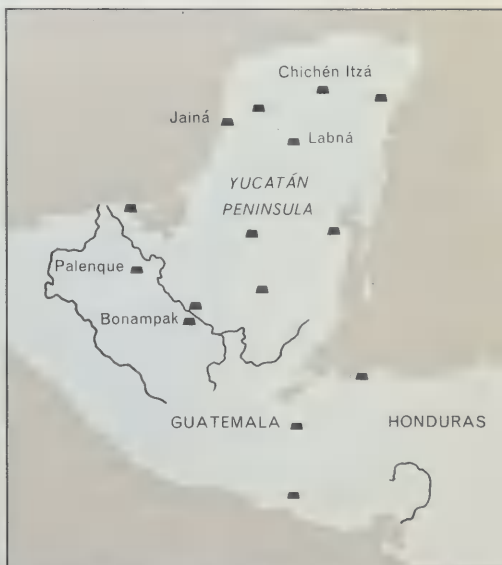
Already, by 5000 B.C., some of the Indian tribes living in Middle America had a village-based culture whose economy rested on the cultivation of Indian corn, or maize. Like the wheat and rice of other countries, corn was developed from wild grasses. It turned out to be a heavy-yielding crop and one that would keep for months.

At some time during the first millennium B.C. the Mayas, who then lived mainly in the hilly country to the south and southwest of the Yucatán Peninsula, became one of the most advanced of these corn-growing peoples. Unlike tribes who lived by hunting, they were able to provide enough food for all members of the community without devoting their entire energy to the struggle for mere existence. During the dry winter months, when there was little work to be done in the cornfields, many people had time to develop skills such as pottery-making and ceremonial building. But the fact that enough food could be obtained for the whole community without the need for full-time agricultural labor from all, led to two further advances. They established a ruling class concerned with government and spiritual affairs. And they built up a labor force that was available during several months of each year for tasks quite unconnected with bread-winning.



Terra-cotta head of a high-ranking Maya man. The eyes are crossed, a mark of beauty and distinction. This was achieved in real life by dangling a pitch ball in front of the eyes of young children.

The Yucatán Peninsula of Middle America, showing some of the main cities of the Maya Empire, now mere ruins in the forest.





The Mayas used both these assets to the full. Beginning several centuries before the time of Christ, the priestly ruling class gradually developed a system of picture writing. This enabled them to keep records of events and to pass on information to their successors. They evolved systems of numerals and devised methods of solving mathematical problems. They studied the motions of sun, moon, stars, and planets and then used the knowledge to produce a calendar that was as accurate as that of the ancient Egyptians. The three hundred and sixty-five days of the year were divided into eighteen “months” of twenty days each, with five “unlucky” days extra.

At its height, from about A.D. 300 to A.D. 900, Maya civilization was organized in a number of city-states. Each served as a kind of “capital” for a number of surrounding villages and each was independent of its neighbors, although there was doubtless some measure of cooperation between them. The aristocratic class, responsible for government and for the direction of religious affairs, seems to have been supported by taxes levied on the agricultural class.

Although the Mayas built impressive cities and devised a sophisticated form of government, the technical level of their culture, in some respects, was that of a stone-age people. Not until after their civilization had passed its peak and they had come under the influence of the Toltecs—a people who had migrated from the Mexican highlands—did they learn to make ornaments of gold and copper. At no stage did the Mayas’ knowledge of metalworking go much

The greatest of Maya observatories is this one, at Chichén Itzá. On top of the large terrace stands a round tower, forty-one feet high. From there astronomical observations were made in order to regulate the calendar.

Below: Page of a Maya codex, in which the lines and dots represent numbers.





beyond that. All their tools and weapons were made of hard stone, flint, and obsidian (a dark volcanic rock somewhat resembling bottle glass). Unlike the Pueblo Indians of North America, they never devised any system of irrigation, even though the land they lived in suffered occasional severe droughts. Although they made and used wheels for children's toys, they never produced the potter's wheel, the water wheel, pulley wheels, or wheeled vehicles. These deficiencies—strange by Old World standards—make it all the more remarkable that the Mayas were nevertheless great builders and civil engineers. This is proved by the remains of their fine cities and huge stepped pyramids.

Most archeologists who make a study of Middle America believe that the peak period of the ancient Maya civilization—the “Old Empire”—ended shortly after A.D. 900. But it is not certain whether the decline was due to internal unrest, invasion, or natural disasters such as droughts. However, while the Old Empire was at its height the Mayas had already established a number of colonies on the Yucatán Peninsula. The most famous of these was Chichén Itzá, a city that flourished for a time but was later abandoned. After the collapse of the Old Empire, the Mayas migrated northward into Yucatán.

There, for a time, there was something of a renaissance of Maya culture, and the New Empire came into existence. Chichén Itzá was again occupied, and a few new towns were built. But the Mayas were not the leading people of Yucatán for long. The Toltecs gained supremacy there between the

The Maya “Palace” at Palenque. Its four-storied tower has been restored to its original condition. It features an internal staircase, rare in Maya architecture.

An entrance to the city of Labná. The technique of stone-laying used in the construction of this archway is known as corbeling, each stone overlapping the one below it.





eleventh and thirteenth centuries. By the time the Spanish arrived, in the early sixteenth century, they found the Maya civilization in decay. The Mayas themselves were beginning to divide into small separate groups.

People, Land, and Livelihood

The Mayas, in common with all American Indians, are of Mongoloid origin. (Some of them have an irregularly shaped bluish-purple mark near the base of the spine called the "Mongoloid spot." This occurs widely among Asian as well as among American Indian peoples.) The Mayas are sturdy, but shorter than most American Indians. The men average no more than five feet one inch in height and the



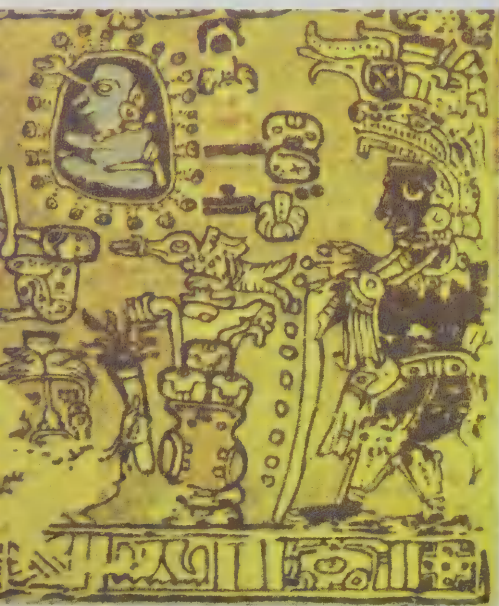


Small Maya terra cottas. These were made of clay, by hand modeling or with the use of molds, and were then painted. From left to right are: A commanding woman, who wears earplugs and a necklace of giant beads; a man in a feathered cloak (this figure is in fact a whistle, with mouthpiece under the left knee); a warrior with feather headdress; and a male dancer.

Maya dog-fanciers, like those in some later civilizations, dressed their pets to make them pretty.

women are two or three inches shorter. Their skin coloring ranges from light coffee to dark copper.

The Yucatán Peninsula, where they lived for several centuries before the Spaniards arrived, is certainly an area of tropical forest. But in other respects it is not at all like the homelands of the Wai-Wais and the Kenyahs. It is not mountainous country, but a flat tableland of limestone with only a thin layer of topsoil, and it is a land without any major rivers. Yucatán differs from other tropical forest areas mentioned in this chapter in yet another way. Its forests lie at an average distance of one thousand miles north of the equator while all the others are within three hundred miles of it. Thus, instead of fairly constant weather throughout



In this portion of a Maya codex, painted on bark paper, a priest sows corn at the annual ceremony. Because of the climate in Yucatán, rainfall was greatly desired. Thus, at the planting, prayers were made to the rain god.



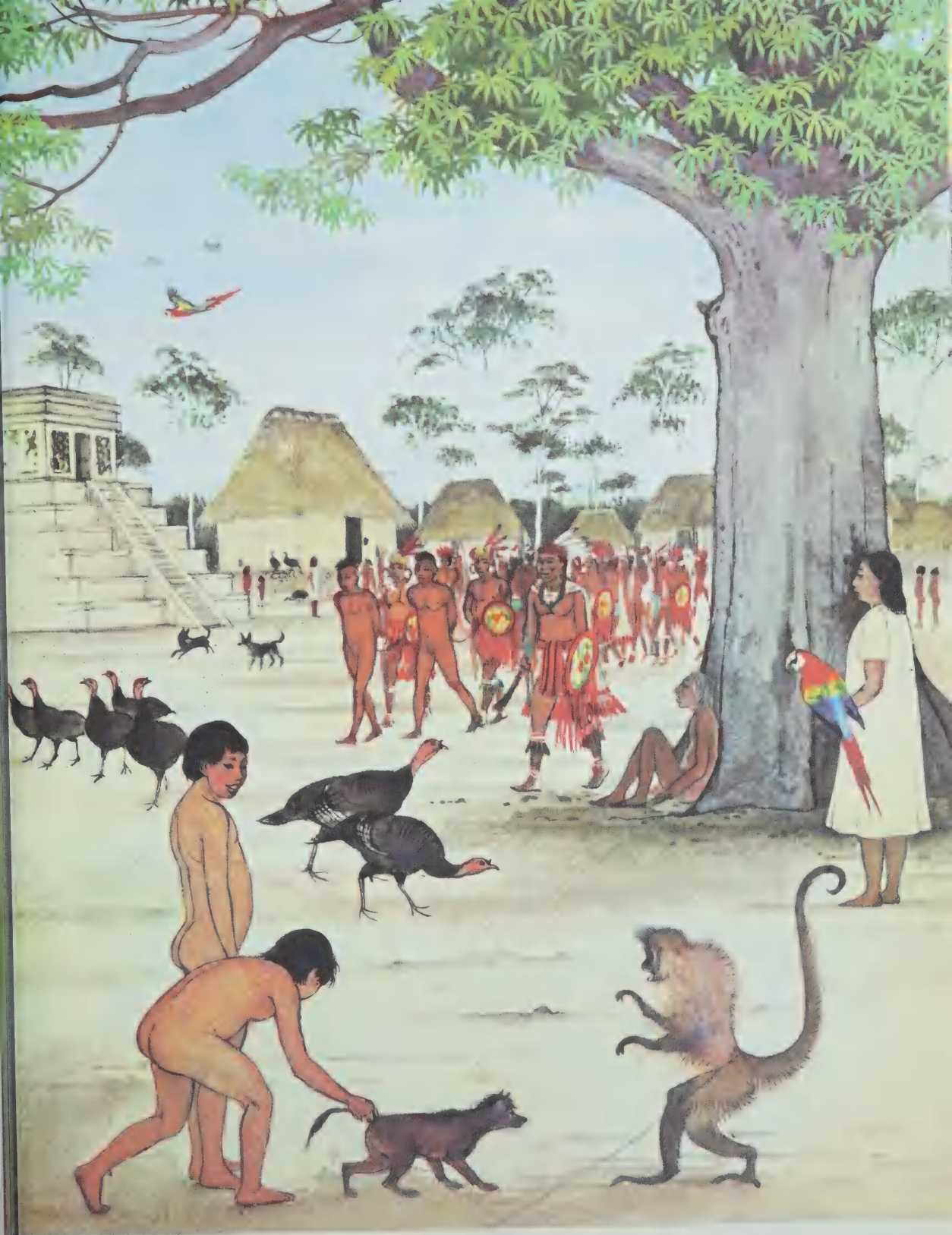
the year, the Yucatán countryside has a definite summer (seven months of wet season) and a definite winter (five months of dry season). This means that for the Mayas, who were essentially an agricultural people, there was a season of routine work on the land and a season of leisure that could be devoted to other pursuits.

The Maya system of agriculture was not unlike that of the Kenyahs. In February, when cold, dry winds blew across the land, men set out to cut down the forest vegetation and topple over the big trees. Valuable timber trees, such as the giant mahogany, were cut with more care, trimmed, and dragged away on rollers for use in building. All the rest were burned. When the ground had cooled, the man who was to farm it walked back-and-forth across it in straight lines making a little cluster of holes in the ground with a stick at every pace. A woman followed behind with a bagful of corn seeds, dropped a seed in each hole, then covered them over, sweeping the soil into the holes with her foot.

No Maya—not even a chief or a priest—was considered to be a landowner. The soil and the crops that grew on it were regarded as belonging to Mother Earth. But the chief, or Nacom, was responsible for allocating plots of land to each family for their private use. Family plots were usually about four hundred yards long and twenty yards wide. Corn was the main crop grown, but not the only one. The Mayas grew beans in their cornfields using the corn stalks as supports. Other crops were sweet potatoes, avocados, papayas, and a sweet cassava. The land also yielded sisal, used for making sandals and ropes, and both wild and cultivated cotton. The Mayas used cotton for making clothes—usually simple white loincloths for the men and wrap-around skirts for the women.

The men's agricultural work centered mainly on clearing patches of forest ready for sowing and in helping with the harvest. Much of the work during the actual growing season, such as hoeing and weeding, was done by the women and children. The children also had the task of driving birds away from the growing plants.

Artist's reconstruction of life in a Maya town. The returning soldiers lead in two captives from a war raid. Their certain fate is death at the sacrificial altar, inside the temple on the left of the picture.



In the limestone country of Yucatán the thin topsoil would easily dry out, leaving the crops to wither if the rains failed during part of the growing season. Another danger to crops came from fierce rain-bearing winds that occasionally swept across the land, flooding the fields and even tearing down trees. It is not surprising that much of Maya religion was concerned with placating the gods of the weather—especially the Four Chacs, who controlled the rain, and Hurakan, the wind god.

Although the Mayas had no flocks or herds, they kept many animals about the house. Some, such as hummingbirds, tame rats, small deer, and tame lizards were kept as pets. Others, such as chickens and turkeys, were kept mainly as a source of meat. The turkeys were also prized for their beautiful tail feathers, which might eventually decorate the ceremonial costume of some priest or chief. The meat provided by domestic fowls was supplemented by hunting. The chief game animals were wild deer, iguana, rabbits, and birds. The main hunting weapons were the men's flint-pointed spears and dart throwers and the boys' blowguns, used to shoot clay pellets at birds. The Mayas who lived in coastal villages were also great fishermen.

Agriculture and hunting together provided the Mayas with a well-varied and satisfying diet. There were stews of chicken or iguana meat with beans and *cacahuates* roots. There was a variety of fruit to be eaten fresh or, as the Mayas often preferred it, partially cooked and served warm. There was deer meat and rabbit. There was a thin corn gruel heavily spiced, usually with red pepper. Above all, there were tortillas, which were served at most meals.

The making of tortillas began overnight, when the women soaked several pounds of corn in water mixed with lime. Early next morning they stripped the softened grain from the cobs, placed it on a large saddle-shaped stone, and crushed it into soft flour with a heavy stone roller. The flour was then scooped off the stone, placed in a pot with a little water, and made into a dough. Next, balls of dough were beaten flat and thrown onto flat stones that had been heated in the fire. There they dried and baked into a kind of thin, crisp flapjack. Tortillas were not only the Maya equivalent of bread, but also the Maya equivalent of fork and spoon, as they were used to convey other food to the mouth.

Like most peoples throughout the world, the Mayas made their own fermented liquors. One of these was a mildly intoxicating beer made by leaving an old piece of dough to ferment in water and then adding honey and spices. This



Terra cotta: Hunter and slain deer.



Codex: Goddess of weaving and loom.



Terra cotta: Mother grinding corn.

was a favorite drink at midday, when the Mayas seldom took a meal. A far more potent drink was made by mixing honey and scented spices with water and fermenting the mixture with shredded *balche* bark. This bark was usually first well chewed by the girls of the family.

Village and Town

The typical sixteenth-century Maya village was set amid a patchwork of fields alternating with areas of forest growing anew on land that had been left fallow. It was usually built in the shape of a square. Three sides consisted of rows of small, neat huts. The fourth was occupied by two bigger houses, one for the chief and his family and the other for the priests. Somewhere in the village—often between the two big houses—rose a large pyramid-shaped block of brightly painted cement. Up one side ran a steep stairway leading to a small temple at the top. Below was the temple courtyard, where priests with black-painted faces held ceremonies in which they burnt balls of copal—a kind of black incense—as an act of worship to the rain gods.

To the Mayas, the most impressive part of the village was doubtless the side that housed the priests, the chief, and the temple. But if peoples of other tropical forests could have visited a Maya village they would probably have been most impressed by the three sides that contained the ordinary dwelling huts. Unlike most forest dwellers the Mayas had a separate hut for each family. Each hut was built on a low rectangular platform made of stones set in cement and edged round with big wooden bars. Four upright timbers, one in each corner of the platform, supported a steep roof, thickly thatched with reeds and covered with a layer of palm leaves. The steep pitch of the roof and the top covering of leaves ensured that even the heaviest of rain would not easily penetrate into the house. The walls were simple screens of strong reeds placed between the uprights. Huts were usually partitioned off into four small rooms, two for the father and mother of the family, one for the sons, and one for the daughters. Near most of the huts there were one or two small storehouses for food and firewood, built in the same way as the hut itself.

For a great part of the year, when work was slack in the fields, more women than men were seen about the village. Some of the men were away in the woods, hunting, and others had joined in a trading excursion to a distant town. Only a few were busy about the village, making new hunting weapons or mending old ones. The women and girls found



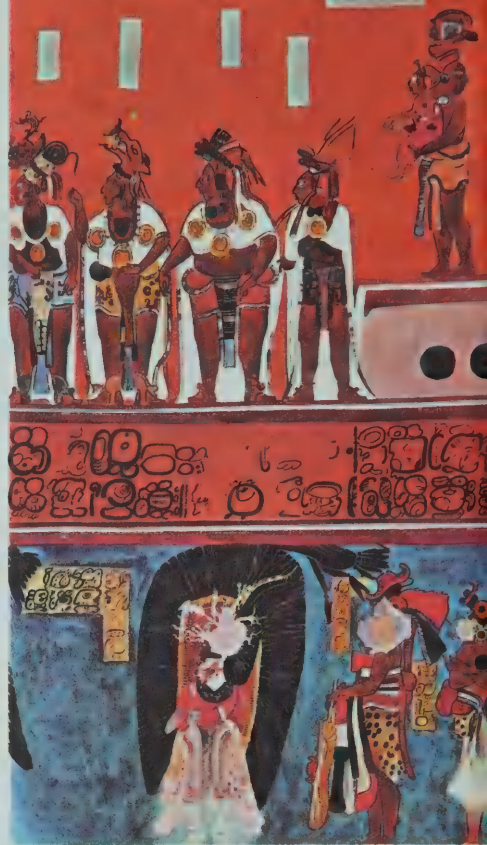
Reconstruction of a painted fresco from the Temple of the Warriors at Chichén Itzá. Here we see the everyday life of a seacoast village depicted in the naïve style typical of Maya art. It reduces people, animals, and things to their basic shapes, and has no perspective.

plenty to do without going far afield. Beside the daily household chores of cooking and gathering firewood, and keeping the house clean—and Maya houses were kept spotless—there was always pottery to be made and weaving to be done.

A Maya girl began making pottery by placing a lump of clay on a block of wood called a *kabal*, which she held between her feet. Then, slowly turning the *kabal*, she rolled the clay into long strips, and coiled strip after strip one on top of another, pinching them tightly together with her fingers. To smooth the vessel as she made it, she used a piece of rind from a gourd. If the vessel was to be a cooking pot, she made it beautifully globular so that the heat of the fire would spread evenly all around it. But if it was to be used for storing grain or water, she made it flat at the bottom and with sides almost vertical, adding three little domes of clay at the base to serve as feet.

Firing the pots was an operation undertaken only on “lucky” days, when there was little wind. The village priest had to be consulted to decide which days were auspicious. When he had made his decision and read a passage from his magic book, the girl would gather firewood and find a sheltered spot where she could work. Then she piled her pots, filled with grass to help prevent them from cracking, on a layer of wood, and covered the whole with twigs. When she lit the wood, the flames rose straight upward, and for an hour or so she fed them with fresh fuel. After that the fire was allowed to burn out into a heap of white wood ash, in which the pots glowed red before they gradually cooled. Finished pots were painted with smooth, gummy paints mixed with vegetable sap, a process that not only beautified them but also made them less porous.

For weaving, Maya women used a simple “backstrap”



Above: A fresco from the temple at Bonampak. A child prince (top, left of center) is being presented to the nobles. Behind (top right) are members of his family. The lower panel shows a fully robed priest attended by high officials.

Below: A chief priest engaged in a religious ceremony (top panel). In the lower panel materials for this event are prepared: jaguar skins (left), a bowl, and a jade necklace (center).





Below: A musical ceremony, in which priestly dancers are disguised as aquatic creatures, is seen in another Bonampak fresco. Squid, crab, and water lily are shown.



loom. They leaned forward to pass the shuttle (which carried the wool) between the warp threads, and leaned back to tighten the weave. Wrap-around skirts for everyday wear were usually woven of blue-dyed cotton, or patterned in blue and white. Sleeveless shirts reaching from shoulders to knees—reserved for special occasions—were made solely from fine white cotton. Their only decorations were a square of embroidery at the neck and a patterned band around the hem.

We saw earlier that the Mayas of the Old Empire were organized into a system of city-states. In the sixteenth century, at least a remnant of this form of organization still persisted. Many villages still had some special relationship with a neighboring town. The village chief, for instance, usually represented his village at the court of the chief of the big town, and often the two men were related. The ordinary villagers, too, had a special interest in the town, for once every twenty days a great market was held there. People from a wide area of the surrounding countryside walked into town carrying whatever goods they had for sale or exchange packed in hampers slung on their backs. These baskets were supported by a strap passed round the forehead.

These market days had something of the air of a medieval fair about them, for they were concerned with many other things beside buying and selling. For the incoming villagers there was the thrill of seeing everything bigger, brighter, and better than at home. Here in town the stepped pyramids on which the temples of the gods stood were truly colossal, and often beautifully painted. Here the home of the chief was not merely a bigger house but a real palace with a great courtyard. Here the priests were not the familiar village priests—men merely respected for their ability to read the

painted hieroglyphic writing in magic books and to be consulted about the “right” days for firing pots. These priests were splendid beings dressed in fantastically gorgeous costumes of white cotton and colored feathers, ready to act the drama of the gods before the market opened. These city priests also made great sacrifices to the gods on market days — tobacco smoke, jade beads, and sometimes even a human sacrifice.

When the Spaniards Came

To some of the Indian peoples of Middle America the coming of the Spanish conquistadors was a sudden and total disaster. The Aztecs, for instance, had built up a great empire in Mexico and had long held neighboring peoples in subjection. Suddenly they found themselves subservient to the white men, their religion stamped out, their treasures confiscated, their temples torn down, and their culture largely destroyed. To the Mayas the change was less drastic. They had formerly been subservient to the Toltecs and now they became subservient to the Spaniards instead.

In 1527 Francisco de Montego arrived in Yucatán with three hundred and eighty men and the intention of conquering the Mayas. The Indians attacked the small army fiercely. By 1535, the Spanish who had not died from sickness during the fighting left to join Francisco Pizarro in the conquest of the Incas. However, in 1542 the Spanish occupied half the peninsula and established a capital. The Mayas who fought on were slaughtered, and by 1697 the





War. In the painting above, from the Temple of the Warriors at Chichén Itzá, soldiers are seen raiding a neighboring village. The attackers have ring-shaped shields, while those of the defenders resemble sunflowers. In bottom panel, two captives are led away, stripped naked, painted with stripes, and with hands tied behind their backs.

Spanish were in full possession. The remaining Indians fled. The heroic and fierce defense of their way of life and their lands against the Spanish had lasted for 170 years.

It is true that the Spaniards destroyed the Mayas' books, so that eventually all knowledge of their written language was lost. It is true that for a time, at least, many Maya peasants became slaves. And it is true that the Spaniards stamped out the old Maya religion and introduced Roman Catholicism. But the number of Spanish settlers in Yucatán was never very great compared with the number of Indian people living there. Inter-marriage between Spaniards and Indians was common. Thus, over the years, there was a fusion between Indian and Spanish ideas and ways of life. Even in religion there was something of a blending together. The saints of the new religion were often the old nature gods only thinly disguised. Some, at least, of the new religious observances were—and still are—conducted in the old Indian languages. Village government, too, was continued in the Indian manner, but with Spaniards as the ultimate masters instead of an Indian aristocracy.

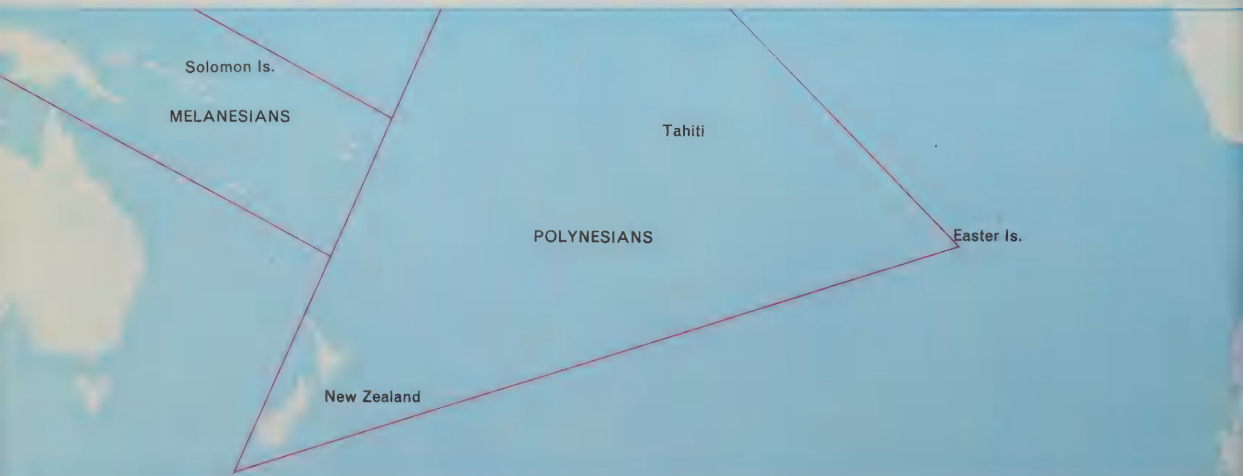
More than four centuries have now gone by since the Spaniards first landed in Yucatán. Almost a century and a half has passed since the Middle American countries gained their independence from Spain. Yet if a Maya of the early sixteenth century could be resurrected and allowed to visit a remote Maya village of today, he would probably find more that was familiar than unfamiliar to him in everyday life.



Scenes from modern Yucatán. Far left: A Maya girl sewing just inside her front door. Left: Inside a Maya hut the religion of today, Christianity, is in evidence. Right: Maya peasants gaze upon the relics of their glorious past.



Above: An islet in the Malaita group, southeast Solomons, houses an isolated village community. This picture shows clearly the intimate contact between the islanders and the sea, which provides most of their food. Map (below) shows the southern Pacific Ocean, in which the islands inhabited by Melanesians and Polynesians are located. The four areas whose inhabitants are described in this chapter are named. They span over six thousand miles.



4 LIFE ON OCEANIC ISLANDS

Solomon Islanders

East of New Guinea and northeast of Australia, between five and twelve degrees south of the equator, lie the Solomon Islands. These are a group of over thirty islands that form part of a much larger island region called Melanesia. The name comes from the two Greek words—*melas*, meaning black, and *nesos*, meaning island—and it refers to the fact that the inhabitants of the islands are dark-skinned.

The racial origins of the Melanesians are not known with certainty. One modern theory suggests that the dark-skinned peoples of the world originated around the Indian Ocean. The Africans are the western group of this people's descendants, and the Melanesians the eastern group. Whether or not this theory is correct, there are strong physical similarities between the peoples of central Africa and those of Melanesia.

As we shall see later, it was not until four hundred years ago that Europeans first discovered the Solomon Islands, and not until the late nineteenth century that the islanders were much influenced by the white man's culture. Long before that time, except for some Indonesian influence, they had adapted themselves in their own way to island life. They had learned how to exploit the riches of the sea and to combine them with whatever advantages a rain-forest environment affords. Here we shall look at the way of life they built up, remembering that in many essentials it still remains unchanged.

The People and their Villages

In the Solomon Islands, as elsewhere in Melanesia, there is little seasonal variation of temperature, and the abundant



Model of a warrior, made by a Solomon Islander. All young men served for a while in the village "army." Body decorations included bleached hair and heavy ear discs.

rainfall is evenly distributed throughout the year. The greater part of each island is covered in tropical rain forest, giving way to volcanic mountains inland, and palm-lined beaches along the shore. In many places the islands are fringed by coral reefs, which may form extensive lagoons.

Living in almost perpetual heat, the islanders never needed to develop an imposing array of garments. The men wore loincloths and the women wore short skirts of bark fiber slung from the hips. Yet the scanty wardrobe did not mean that they were indifferent to personal adornment. Everyone wore armlets, pretty necklaces, and earrings. And both sexes were tattooed in childhood—nothing elaborate, but just a few blue lines and dots here and there about the face and limbs that toned well with the dark skin. In addition the girls wore headbands made from braids of colored grass to hold up their hair. But it was the young men—the teenage warriors—who carried personal adornment furthest. The girls' earrings might consist only of a little chain of shells. But the young men, whose ears were pierced in infancy and gradually stretched throughout childhood, wore really big ear discs, decorated with pearl shell. These discs swung just clear of his shoulders and glittered as the wearer walked. Some of the young men also bleached their hair to a creamy-white mass of curls, with the help of lime. In all forms of decoration three colors predominated: red, from the red earth in the volcanic rocks; white, from burned white coral; and black, from the soot of the cooking fires.

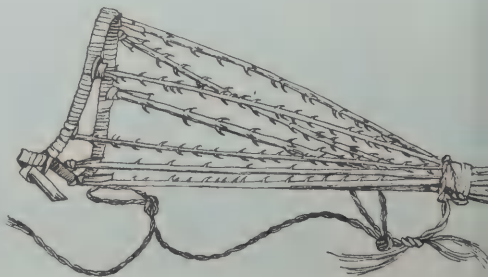
The Solomon Islanders lived in small communities, largely cut off from each other by language barriers. The difference in speech between neighboring villages was often much more than what we normally think of as a difference in dialect. The speech of one community might be almost unintelligible to its neighbors. Thus different villages tended to develop different customs. This helped to give rise to mutual suspicion and distrust, and until quite recent times it often happened that the only contact between neighboring communities was by way of warfare. Partly for this reason, partly because of land shortage, and partly because of the constant danger of invasion from other islands, the villagers lived in permanent readiness for war.

The villages themselves were small, with a population of fifty to two hundred people. Each consisted of a number of thatched houses, one for each family, raised on stilts for purposes of defense. There were no windows and the door was small, so the inside was dark and ill-ventilated. The occupants slept on mats on the floor, with baskets of food hanging from the roof on hooks. Tools and weapons lay



Above: The village of Verahue, on the northwest coast of Guadalcanal Island. Stilt houses, palm fronds, and sunshine set the Solomon Islands scene, where life is slow and tends to be monotonous.

Below: An unusual type of fish trap is found in the Solomons. The bait is placed inside the small end and the fish is unable to back out against the angle of the thorns.





Solomon Islanders at work. Top: A young man makes palm-leaf panels for building. These panels are then tied to rafters and wall frames. Bottom: An old man making nets.

In this type of fishing, each net is suspended by its corners from a long bamboo pole, and is lowered into the water. When a fish swims above the net, the fisherman lifts it up.

scattered about, while valuables, such as ornaments and charms, were hidden in the thatch.

Before the arrival of the white man, the Solomonese were a stone-age people, without any knowledge of metals. Indeed, there are no metal-bearing ores on these volcanic islands, and all tools and weapons were therefore made from stone or from sea shells, as many still are today. There was certainly no shortage of shells, and a favorite one for making tools and ornaments was that of the giant clam, *tridacna*, which has a shell weighing as much as two hundred pounds.

On the coast, fishing provided most of the food. Inland there was greater reliance on vegetable products, chiefly yams (climbing plants that produce club-shaped starchy underground tubers like a potato) and taro, a plant that also produces thick, starchy underground tubers. These, like the crops of the rain-forest dwellers described in Chapter 3, were grown in patches of cleared forest. The climate of the Solomon Islands is so uniform all the year round that these crops could be planted at any time and harvested a few months later. For the villagers who lived near the coasts, vegetable crops were only a supplement to the main diet of fish. So in coastal areas the islanders did not farm on any large scale, but worked small individual garden plots.

The tropical forest provided plenty of nuts and fruit, and meat was obtained by hunting forest rats, "flying" foxes, and wild pigs. Domesticated pigs were also kept, but not in enough numbers to provide a steady source of meat. They were eaten from time to time, but they seem to have been kept mainly as a "status symbol." In a land where there was no money, to possess a large number of pigs was to proclaim one's wealth and power. The domesticated pigs had another use. Their tusks were much in demand for necklaces and other personal decorations.

But, undoubtedly, chief among the foodstuffs that made for easy living were the varieties of sea food to be found in abundance around the islands.



Canoes with a Difference

The conventional primitive boat is a dugout—that is, a vessel hollowed and shaped from a single tree trunk. The Solomon Islanders, however, built canoes of a different kind, using planks in much the same way as we do when constructing certain types of small boats. Each plank was cut and shaped from palm trees with stone and sea-shell tools, and sometimes a whole tree yielded only one plank. After shaping, the planks were rubbed smooth with blocks of fine-grained coral, the Solomon Islanders' equivalent of our files and sandpaper. Then they drilled holes along the edge of each plank.

The drill, primitive but ingenious, was called a “pump drill,” because of the pumping action the operator used. It consisted of a vertical shaft fitted at its lower end with a cutting edge of sharp stone or shark's tooth. A short way up the shaft was a wood or shell disc that acted as a flywheel. To the top of the shaft, two fiber strings were knotted. The other ends of the strings were tied to a small wooden handle (see illus. p. 126). To start the drill, the operator spun the shaft so that the string wound around it. Then a sharp push on the handle set the drill spinning. At the bottom of the stroke, the operator released the pressure on the stick. The momentum of the flywheel then kept the drill spinning, winding up the string ready for the next downward push. An empty half coconut shell served as a bearing for the top of the drill. The operator held it with one hand and regulated the pressure on the cutting edge.

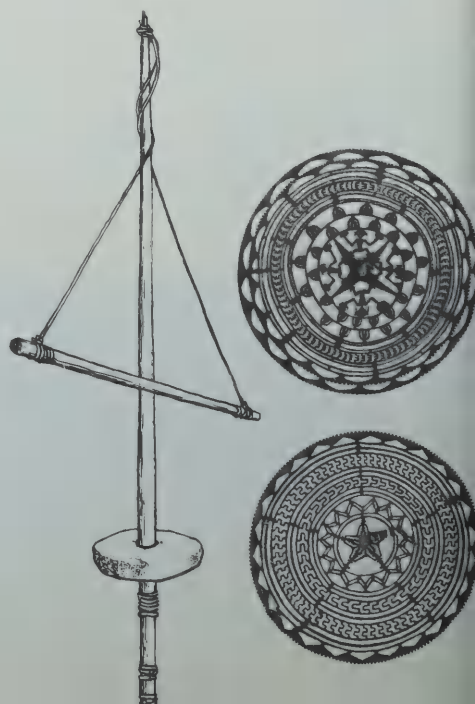
When drilling was completed the planks were sewn together and tied to the canoe's inner framework with strong fiber cords. At this stage in boatbuilding, when a boat is “carvel built,” with its planks laid edge to edge, a boatbuilder is always faced with his biggest problem: how to make the hull watertight. We do it by *calking*—that is, by hammering oakum fiber into the space between the planks and filling in with pitch. But the Solomon Islanders made use of a special nut called *parinarium*, or putty nut, which when crushed forms a thick waterproof paste that is ideal for calking.

When the calking was completed, the boat was not yet ready to go to sea. Every fishing canoe had to carry at its bow a black carved figurehead, with mother-of-pearl eyes, and two hands grasping a fine fish. This image represented a guardian spirit. Once it was fitted onto the bow, the boat was believed to be able to find its way to and from the fishing



Above: Woman at Langa Langa, in the southeastern Solomon Islands, making “coins” by boring chips of shell with a pump drill.

Below: The Solomons pump drill. The drill was also used at the start of production of the fine openwork forehead decorations (right). These are made of turtle shell backed by the shell of a giant clam.



grounds and to be capable of making a good catch. The big canoes kept for warfare and for head-hunting raids, carried a similar figurehead, but one which held in its hands a human head instead of a fish.

Although the Solomon Islanders seldom made long voyages, it was essential for them to feel thoroughly at home in their own coastal waters. Not only did they depend on the sea for much of their food. Each community also had to safeguard its own strip of coast against sea-borne raids by other communities. For this purpose each village maintained its own war canoe, capable of carrying between sixty and a hundred men, and ready to put to sea at a moment's notice. So it is not surprising that the canoe house that held the war canoe and the biggest of the deep-sea fishing canoes was the most important building in the village.

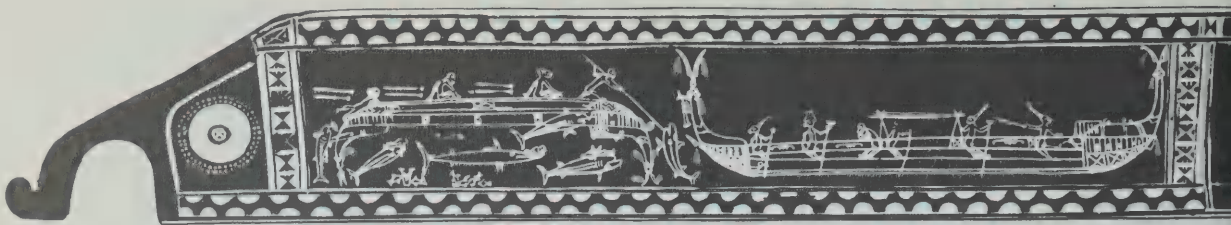
Across the seaward entrance to the canoe house was a board decorated with carvings of the frigate bird. When a boat passed under the board at the start of each fishing trip, everyone wished that the crew would catch fish as easily and unerringly as the frigate bird, which swoops on the sea and never misses its prey. The carvings of the frigate bird were expected to work a kind of magic. But the canoe house had more in it than magic. It was also an armory and a barracks. In the long low room under its thatching, shields, spears, clubs, and long bows were stored. There, too, the warriors lived.



A figurehead from a war canoe. It represents a guardian spirit with a captured enemy head.

Warriors preparing to leave on a raid against another village. A canoe house is seen in the rear at right. In the foreground a crew of fully decorated warriors, their weapons below them in the boat, sets out to sea.





Warriors and Work

The warriors were young men in their teens, recently admitted by initiation ceremonies to the status of manhood. Custom demanded that young men should spend a period away from their families. During this time they practiced with their weapons, made new ones, and stood in constant readiness to defend their own village or to raid another one along the coast.

Apart from their military training, the young men spent much of their time in decorating their weapons with carving and in trimming them with colored grasses. They also fashioned elaborate decoration for their own persons. Much of their work was intricate, particularly the carving of open-work designs in turtle shell. A favorite decoration consisted of one of these shell designs mounted on a backing of clam shell (mother-of-pearl) and worn on a headband. A young warrior would have his body oiled until it shone, his hair bleached and decorated with an impressive headband, his distended earlobes weighted down with great ear discs, and the septum of his nose pierced to carry slivers of cane. He must indeed have looked a splendid and terrifying figure to his enemies.

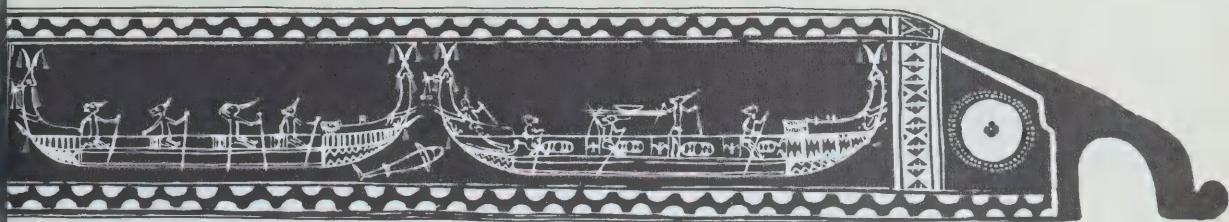
Today, warfare among the Solomon Islanders is a thing of the past, but even while it went on it was not always a very glorious or heroic occupation. Often, for instance, the purpose of a head-hunting raid was to take a single head that was needed for some ritual purpose, such as the launching of a new war canoe. As among the Kenyah of Borneo, the most treacherous schemes were sometimes designed for obtaining the head. A common trick in the Solomons was to visit a distant village with a great show of outward friendship. After having been offered hospitality, they would then take a head and make off as quickly as possible.

The segregation of part of the male population as warriors

One side of an ornamental tie beam from the village hall at Uji, in the Solomons. Four highly decorated canoes are engraved and painted on it. The one on the left has turned turtle, casting some of its crew to the waiting sharks.



Above: Ngorieru, a sea Spirit. Such beings were believed to be found near the rainbow and the waterspout. They attacked men out fishing in canoes by shooting little fish at them. Such men would die unless they could reach home and offer the spirits a flying-fox's tooth. Right: Another sea spirit, carved in wood.



resulted in more work being placed on the women. The men did the heavy work of deep-sea fishing and clearing the ground for planting. But it was left to the women to do the inshore fishing, tend the garden crops, collect fruits, and make cloths. The islands had no cotton or wool and had to depend on the fibers of the *pandanus* and other plants. These fibers are in the leaves. After a soaking, the women used to separate them from the fleshy part of the leaf and spin them into string, which was then used both for fishing lines and for making a coarse cloth.

Another part of the women's work was the making of pottery. The need for pottery vessels was perhaps not pressing in a land where drinking vessels are easily made from coconuts cut in half. However, there was still a need for pots for cooking and for storing nuts and dried food. Not all the Solomon Islands had a supply of suitable clay, and thus pottery was traded from clay-bearing islands to others that lacked the material. The islanders never discovered the potter's wheel, which is curious when we think of the rotary drill that they used with such skill in boatbuilding. Instead, the women molded pots by hand. Methods of shaping pots varied from one island to another, but the result in each case was a pot with a round bottom, which could not stand by itself. Thus each pot had to have a basket to hold it, or else a ring of plaited grass to stand on. There was some decoration in the form of patterns scratched onto the surface with a pointed stick. But the Solomon Islanders used nothing like the elaborate decoration or coloring found in the pottery of the Mayas. After shaping pots and drying them in the sun, the women fired them in open bonfires. The result was a brick-red vessel, rather thin and brittle.

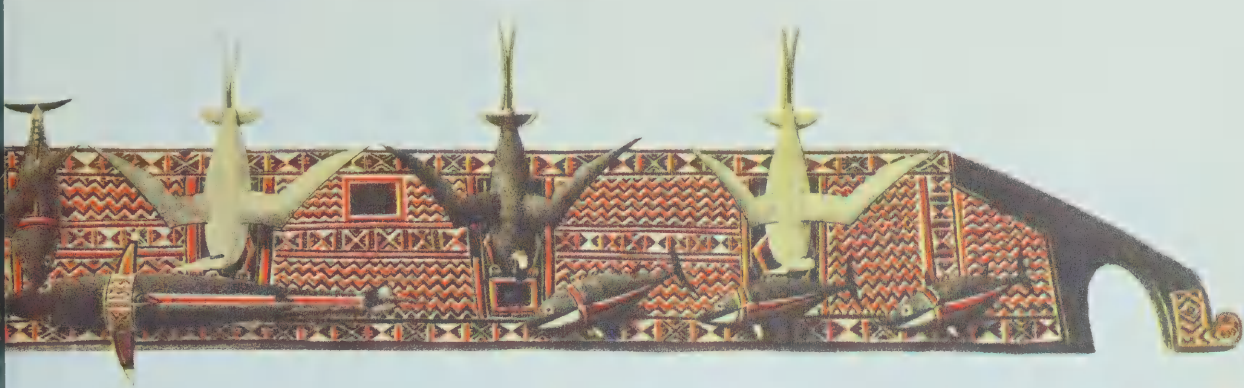
The Solomon Islanders had no complex system of religion, although they believed in a great multiplicity of spirits. Their religious ideas were concerned mainly with putting spells on other people and warding off spells that



The other side of the tie beam from Uji (illustrated on the preceding page). A number of frigate birds, sharks, and bonitos have been carved and fixed to the beam.

Among the finest carvings of the Solomon Islands are the wooden food bowls, stained black and inlaid with mother-of-pearl.





In the Solomons, the skulls of dead chiefs were kept and venerated, because it was believed that their spirits returned to live in them. In the central Solomons a miniature house was made to contain the skull (below) and this was then buried under a heap of stones. The wooden statuette (left) represents an ancestral figure.



Above: The Solomons are a British Protectorate today, and these native wood carvers have captured the expressions of their British administrators.



The Mako-mako dance is a mime performed by two groups of villagers—the masked “men of the bush” (above) and the “canoe men,” who attack them with clubs and finally put them to flight.

other people might try to put on them. Similarly, living as they did in small communities, they did not evolve an elaborate social organization. A man might compete for prestige, perhaps by increasing his stock of pigs. But he could never hope to be a member of any ruling class, for there was no ruling class. Neither were there any chiefs. The affairs of the village were conducted by a council of elderly men who had been allowed to assume authority simply because their neighbors had found that they were to be trusted. These men decided which were the “right” days to begin house-building, to do the taro planting, or to make a raid on a neighboring village. They met in a kind of council chamber, decorated with magical carvings, but this building rarely rivaled the magnificence of the big canoe house.

White Influence in the “Black Islands”

The Solomon Islands were discovered in 1568 by the Spanish explorer Mendaña, who left a trail of dead natives behind him. Then some two hundred years elapsed before any more Europeans came to the Islands—mainly the crews of whaling ships, looking for fresh water and food. During the early nineteenth century missionaries tried to settle there, but numbers of them were killed and most of the rest withdrew. Later, traders and slave-raiders, who paid for the natives with rum and guns, caused widespread slaughter on the islands. But by the end of the century Britain and Germany had set up protectorate governments over parts of the island group, to look after the property of the European traders and to control their use of native labor. More peaceful conditions were thus established. Plantations flourished and missionary activities were resumed. However, the missionaries did not all belong to the same Christian sect, so that some of the islanders embraced one sect and some another. The traditional rivalry between different communities now found a new way of expressing itself. As late as the 1930s it was still fairly common for converts to different missions to burn down each other’s chapels, until the government intervened.

But excitement, it seems, has to be found, and rivalry has to discover some new way of expressing itself. Today chapel burning has ceased. Rivalry among the Solomon Islanders tends to express itself symbolically, and in a way that does not lead to trouble with the authorities. More and more the islanders compete by amassing “pig wealth,” and by giving parties for which large numbers of their pigs are slaughtered to shame their rivals.



This portrait of two Tahitian women, by Paul Gauguin, shows the straight hair characteristic of all Polynesian peoples. Gauguin was a nineteenth-century French artist who lived among the Tahitians for several years.

The Tahitians used a double canoe (below) for short journeys around the islands. Chickens and pigs were among their provisions, and the roofed-over sections of deck sheltered the crew of men and women.

Polynesians of Tahiti

Tahiti is one of the largest of a group of islands known as the Society Islands. Discovered in 1767 by a British explorer named Wallis, they were first named by Captain James Cook who visited Tahiti two years later in order to observe a transit of Venus across the face of the sun. Lying about a thousand miles south of the equator and near longitude 150° west, Tahiti is at the center of a vast triangle of the Pacific Ocean. This is bounded by Hawaii to the north, New Zealand to the southwest and Easter Island to the southeast.

This area is called the Polynesian Triangle, and contained within it are hundreds of islands inhabited by a people who are of a single common stock. We usually call them Poly-



nesians (from two Greek words, *polys*, meaning many, and *nesos*, meaning island), although they call themselves Maori. From one group of islands to another there are local differences in their appearance, color, and culture, but these are no greater than those which occur in other racial groups over similar distances. In contrast with the Melanesians, the Polynesians are not of Negroid stock. The Polynesians' skin color is brown and their hair is straight.

The Polynesian Navigators

It is almost certain that their remote ancestors, perhaps as long as two thousand years ago, migrated to various Pacific islands from the forest lands of southeast Asia. How and why they did so are not known. Perhaps they made the move intentionally. Or perhaps mixed crews of men and women were blown off course while fishing, and settled thankfully when they were lucky enough to sight an island. Either way, they must have had unusually big and seaworthy canoes for that period. But settling islands of the open Pacific raised an awkward long-term problem. Most of these islands are quite tiny, and after a few generations they became so overcrowded that wars broke out over rival claims for land. Some people went away to seek new island homes. This process of discovering and settling island after island went on for many centuries. It seems that Tahiti itself had at least two separate waves of settlers, one at some unknown time before the eleventh century A.D., and one fairly soon after.

It is uncertain whether the early migrations from southeast Asia were the result of intention or accident. But there is strong evidence that the later migrations from island to island were undertaken deliberately. We know, for instance, that Polynesian women do not accompany their menfolk on deep-sea fishing trips. Thus if a fishing crew had been blown off course onto a formerly uninhabited island, it could have left no descendants. So it seems clear that the Polynesians who went to "new" islands must have taken women with them deliberately, with the intention of making homes and raising families there. Further, we know that some of the animals such as chickens and pigs, which were already living in many of the islands when Europeans first arrived, are not indigenous. It therefore seems that they must have been taken there by the settlers with the intention of rearing stock for their food supply.

By the time Europeans first visited Tahiti, the Polynesians had spread out among hundreds of small islands scattered over several million square miles of the Pacific. Yet throughout the whole of Polynesia there were many striking simi-



This map of Tahiti was made on the first of Captain Cook's three voyages to the island, in 1769. Tahiti consists of two old volcanic peaks.

Cook was present at a human sacrifice in Tahiti (right) made to obtain support from the gods for an attack on a neighboring island. It is to Cook and his artists that we owe most of our knowledge of Tahiti in the eighteenth century.





Left: The costume worn by the chief mourner at a funeral. It was made of bark cloth and decorated with pearl shells and tail spines of the frigate bird. Above: The chief mourner approaching the body of a dead person, which lies on a *toupapow*, or bier.

larities of culture and language. This was partly because all the island societies had common origins, and partly because occasional voyages between one island and another helped to maintain unity.

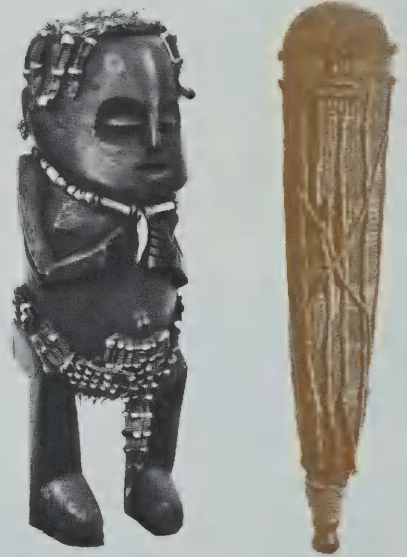
These voyages between tiny islands, separated by hundreds, and sometimes thousands, of miles of open ocean, rank with the greatest feats of the Viking navigators. Yet they were made by a people who, unlike the Vikings, had no knowledge of metals or metalworking to help them in boatbuilding. Long before Europeans first made contact with them, the Polynesians were building boats of all sizes. These ranged from small dugout canoes, stabilized with an outrigger, to huge double canoes capable of carrying over a hundred people, and equipped with sails for use when the wind was favorable. It is interesting to notice that the idea of the double hull, or catamaran—now coming into fashion for high-speed yachts in the Western world—was first thought out and put into practice by the Polynesian islanders centuries ago. As we look at the traditional way of life of the Polynesians of Tahiti, we shall find that craftsmanship, and especially the craft of boatbuilding, held a place of special importance.

Religion and Craftsmanship

Religious thought and feeling were among the outstanding characteristics of the Tahitians. Their religious ideas, in common with those of other Polynesians, were chiefly concerned with *mana*, or holy power. They believed that they were descended from the gods, and accordingly they endeavored to be worthy of their great ancestors. The idea of descent from the gods powerfully affected their social organization. It was believed that people of noble rank were descended in senior line, while commoners were descended in junior, or inferior, line. Thus prestige and power were not things to be competed for, to be won or lost. They could only be inherited. The man born to noble rank was somehow nearer to the gods than other men, and commoners must always behave carefully in his presence.

Religion was also intimately tied with craftsmanship, for the god *Tane* was not only god of the forests but also god of beautiful workmanship. Whenever a new tool was made or a new boat built, it was dedicated to Tane's service.

Tahiti, like other central Pacific islands, is of volcanic origin, and its hard basaltic rock provided the essential raw material for toolmaking. Fortunately this rock is cut across by many cracks. Otherwise, having nothing harder to work





The Tahitians of some areas built *marae*, or temples to their gods. This is the great *marae* of Mahaiatea, made of hewn stone and coral, fitted together without any mortar. It is here seen shortly after being built. Today little of it remains.

Left: A household deity of carved wood, and a woven representation of Oro, the lord of war. These are only two of the many gods of Tahitian religion

The Tahitians had no efficient means of caulking the seams of their canoes. So it was necessary for one or more of the crew to bail (below).



with, the islanders would have found it extremely difficult to quarry. As it was, they drove wooden pegs into the cracks and then soaked them, with the result that the wood expanded and split the rock into pieces of manageable size. The Tahitians often fashioned sacred images from the larger lumps of basalt and used the smaller pieces for making tools. They did this by beating a piece of basalt with a rough ball of stone. In making an *adz*, one of their principal cutting tools, they shaped the black basalt until it was about eight inches long and three inches wide. Parallel-sided, it curved toward its chisel-shaped end. When it had been slowly bruised and broken into shape, the cutting edge—almost as sharp as that of a steel chisel—was obtained by rubbing the *adz* against another basalt stone, using sand as an abrasive. Previously, the toolmaker had prepared a stock of slowly dried handles, shaped from tree branches. He now took the sharpened *adz*-head and a handle and bound them securely together with a length of strong coconut fiber, or *sinnnet*, one of the most important natural products of the Pacific islands. Finally he drove in wedges to hold the head firmly in position. The *adz* was then technically ready for use.

Technically, but not spiritually, for no *adz* could be used until it had been consecrated. On a moonless night the toolmaker took his *adz* to the temple of Tane, a simple wooden building that stood beside a raised stone platform where the chiefs were buried. The interior of the temple was decorated with beautiful wood carvings of the god. The toolmaker, being also a skilled wood carver, was entitled to enter the temple, approaching on hands and knees. He gave the *adz* to the *tohunga*, or priest, and together they joined in a chant to the god, asking that his *mana* pass into the tool. After this brief ceremony, the tool was laid up in the temple until the new moon appeared. By that time the *adz*—the Tahitians believed—had been filled with power, and was fit to be used in the serious business of building a double canoe.

Canoe-building was also accompanied by ritual. First the village chief selected a tree for felling. The villagers gave him presents, and he made offerings to the spirit of the tree. Then, after burning wood had been placed round the base of the trunk in order to char it and make it easier to cut, men with heavy *adzes* felled it. When the tree had been trimmed of branches, part of it was split by wedges and *adzed* down into planks for the canoe sides. The other part was left solid, to be carved to form the long curving keel and lower part of the hull. Canoe-building was too important a matter to be hurried, and the wood was carefully kept in a





In 1774 Cook watched a great naval review, in which almost three hundred double canoes took part, containing not less than 7760 men. Finest were the high-prowed war canoes, of which there were one hundred and sixty, each from fifty to ninety feet long. Each was propelled by an estimated number of one hundred and forty-four rowers.



Smaller than the fighting canoes were the traveling canoes, or *tipairua*, (left). These were used to feed the warriors during sea fights, as their giant craft carried no provisions. On the extreme left is another type of canoe used in Tahiti—the outrigger.



shady place for a time so that it would not dry too quickly and split or warp.

When all was ready, the boatbuilders put the finishing touches to the hull and planks. They rubbed them down with wooden tools covered with rough sharkskin, in the same way as we would use sandpaper. Then, like the Solomon Islanders, they bored holes along the edges of the close-fitting planks and lashed them together with tough-woven sinnet. This swelled when wet and prevented leakage of water through the holes. Calking of the planks was done with coconut fiber and a gum made from breadfruit. However, it seems that the canoes built by the Tahitians were not watertight as those of the Solomon Islanders. Part of the standard equipment of each hull was a pair of carved wooden bailers, and when the craft eventually put to sea, two of the crew were allotted to the sole task of bailing continually.

When a ship is launched in a modern industrial shipyard, there is always a sense of occasion, and those responsible for the building give a party. The event is too important to be taken simply as a part of the day's work. In much the same way, in Tahiti, the launching of a double canoe was an

Women of the "Areoi society" enacted ritual dances, dressed in elaborate costumes. They wore headdresses made of braided human hair with white gardenias. The performance included complex face and arm movements.

Below: Spear rest from a Tahitian war canoe. The design shows two protecting spirits supported by very stylized squatting figures. Right: A religious carving of pairs of ancestors, the first at the top.





occasion for large-scale festivities. These centered for the main around a huge feast, attended by the whole village. At launching site the villagers dug trenches and lit fires in them. When the fires died down they wrapped bundles of meat and fruit in leaves and buried them in the hot ashes. There were no earthenware ovens or cooking pots, for most of the Polynesian islands were without clay, and the art of pottery making was unknown. Wooden dishes and coconut shells took the place of clay vessels.

While the food was cooking, the villagers assembled on the shore at the launching site. The chief and others of noble rank were on one side of a square, and the lesser folk on the two adjacent sides, while the fourth side was open to the sea. Speeches were made and prayers said, and then the canoe was run into the river on wooden rollers. We "baptize" a ship before launching, by breaking a bottle of champagne over her bows. The Tahitian ritual occurred after the canoe was afloat. The Tahitians rocked the vessel so that it would "taste" the sea spilling in first over the bow and then over the stern. Only then was the canoe well and truly launched. After it had been bailed thoroughly, it was left anchored to a large stone, while the hot foods were dug up from the earth ovens and the feasting began.

After the feasting, came dancing. This had a distinctly religious flavor, particularly if the village had secured the services of a troupe of professional dancers and actors. Dressed in scented clothes of saffron yellow, they enacted a sacred ballet about the history of the gods. These dancers were members of the *Areoi* society, dedicated to the gods, and therefore *tapu*, or separate. This was the origin of the Western word "taboo," and the Tahitians believed that anyone who was *tapu* had a special god-given power and must be treated with awe and respect. Thus if these dancers took a liking to anything in the village, they were allowed to take it away, on the pretext that the god *Oro* (another deity subordinate to Tane) wanted it for himself.

The condition of being taboo was believed to spread temporarily to an individual who had taken on a special task. If, for instance, a man decided to carve a wooden image of one of the gods—a job that might take as long as a month to complete—he had to live apart from his family while he was doing it. He was considered to be in an exalted state, receiving *mana* from the gods. It was thought dangerous for anyone else to touch him, in case the *mana* should flow into someone not worthy to receive it, and possibly kill him. So, while the wood carver worked on his image, he lived alone.



Tahiti—Land of Plenty

Economically, the Tahitians were well provided for. The sea supplied them with a variety of fish, shellfish, and cuttlefish. Inland they grew an ample supply of bananas and breadfruit, a starchy product of a tree called *Artocarpus altilis*. Cooked in its skin in hot embers, it tasted like boiled potato mixed with sweet milk. This supplied most of the carbohydrate part of the Tahitian diet. In addition, coconuts provided not only food and a pleasant drink in the form of “milk” from the unripe nut, but also fibers for making lines and ropes.

The richness of the variety of foods that their land offered was partly due to the enterprise of the early Polynesian voyagers. They had been methodical in their migrations, introducing pigs and chickens where there were no indigenous animals but rats. And they brought to “new” islands the starchy taro root, which they may have picked up long ago in Indonesia.

Cotton was unknown in Tahiti, as was the fibrous pandanus from which the Solomon Islanders made a rough kind of cloth. However, the Tahitians did not go naked. They made ample supplies of *tapa*, or bark cloth—a fibrous,

Above: A sailor from Captain Cook's expedition bartering a piece of cloth for a tasty morsel of sea food. European voyagers to the South Seas always took with them copious supplies of trade goods, which they then exchanged for food on arrival at inhabited islands.



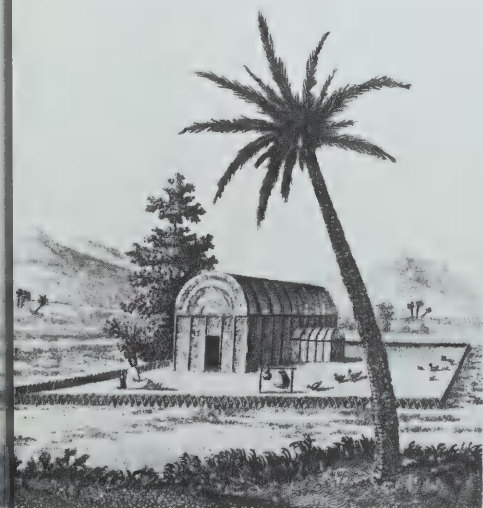
A piece of decorated *tapa*, or bark cloth (right). The main pattern of pointed leaves has been painted on. In addition, dyed fern leaves have been pressed onto the cloth.



Captain Cook first suggested that the breadfruit, native to the South Pacific, might make a useful food in the West Indies. Later, Captain Bligh of the *Bounty* took a seedling over to the New World (above). Another voyage later established it in Jamaica.

sheetlike material—from the inner bark of the paper-mulberry tree. Strips of inner bark moistened and beaten with a grooved mallet were formed into lengths simply by beating or “felting” the fibers together. A single bale of this felted cloth might be as much as two hundred yards long and a yard wide. The cloth was highly decorated with vegetable dyes, and much use was made of natural patterns, often produced by pressing dyed leaves and flowers onto the tapa.

Tahitian houses were made of wood and thatched with leaves. They were not grouped into tight villages but dispersed singly or in small groups, each household having its own garden plot on which it grew what food the family needed. A favorite site was right at the water’s edge, where the houses were built on stilts, providing protection from rats. Inside, the family kept its few possessions. There were wooden bowls and coconut-shell cups, sleeping mats, and bamboo neck-rests that served as pillows. In coastal houses there was also a variety of types of fishing tackle. This included a carefully made line fitted with a peculiar kind of bait in the form of an imitation rat made of brown cowrie shells and a piece of seaweed to represent the tail. This was used by the women for catching cuttlefish in the shallow



A chief’s house (above) was lofty and cool inside, and had a trim yard in which domestic fowl were kept. Right: A bait for cuttlefish made of cowrie shell (see text).





A woodcut by Gauguin, from his book *Noa-Noa*, in which he wrote about his experiences in Tahiti.

water inshore. They dangled the bait over hollows in the coral reef, and when the cuttlefish grasped the “rat,” they pulled it up by its tentacles.

The first Europeans to visit Tahiti regarded it as a paradise on earth. The climate was delightful, the food was good, there seemed to be little disease, and the people were good-looking, courteous, and friendly. European ships’ crews were particularly attracted by Tahitian girls. In return for their favors, the Tahitians asked for nothing but nails, the most useful thing that Europeans could give them. Wallis, an English sea captain who landed on Tahiti in the 1760s, reported that sailors pulled so many nails out of the ship that he became afraid it would fall to pieces, and had to forbid his crew to go ashore.

Early in the nineteenth century, Catholic French and Protestant English missionaries arrived and began to convert the Tahitians to Christianity. In 1843 the island came under French protection. Many Chinese were now brought in as sugar and cotton plantation laborers, and some racial mixing occurred. But the relaxed way of life of the islanders continued much as before.

Today the people of Tahiti are French citizens, and their island with its big, modern hotels is the center of the south-seas tourist industry. Yet they have, to some extent, preserved their simple way of life, and they continue to delight the tourist with their gay dancing and courteous manners.

A schoolroom in Tahiti today. Outside the window are palm trees. Inside, a poster advertises France.



Easter Islanders

Overcrowding seems to have been a chronic problem in Polynesia in the days before Europeans introduced diseases to which the natives had no immunity. Having so little space on their islands, the Polynesians seem always to have been fighting each other over land. When a chief was defeated and his lands taken, tradition left only one honorable course before him. He and his followers must put themselves at the mercy of the sea and search for another island on which to make a new home.

We shall never know how many boatloads of Polynesians set out in search of new land only to die of starvation or shipwreck before making a landfall. However, more than a thousand years ago, at least one party (and according to local tradition two) finished up at Rapa Nui in the south-east Pacific. Later the island came to be called Easter Island, because the first European to sight it, the Dutchman Jacob van Roggeveen, did so on Easter Day, 1722.

Easter Island is one of the most isolated spots on earth, a mere speck in the vastness of the Pacific. It forms the southeastern corner of the Polynesian Triangle. It is a



An early portrait, drawn in the 1770s, of an Easter Island woman. She has the stretched earlobes typical of the islanders at that time, and wears a shell pendant.

This engraving is based on a drawing by an artist who traveled with the French explorer La Pérouse. It shows a party of officers ashore on Easter Island, surrounded by curious islanders. While the officers measure and sketch the statues, several of the natives are pilfering their possessions.



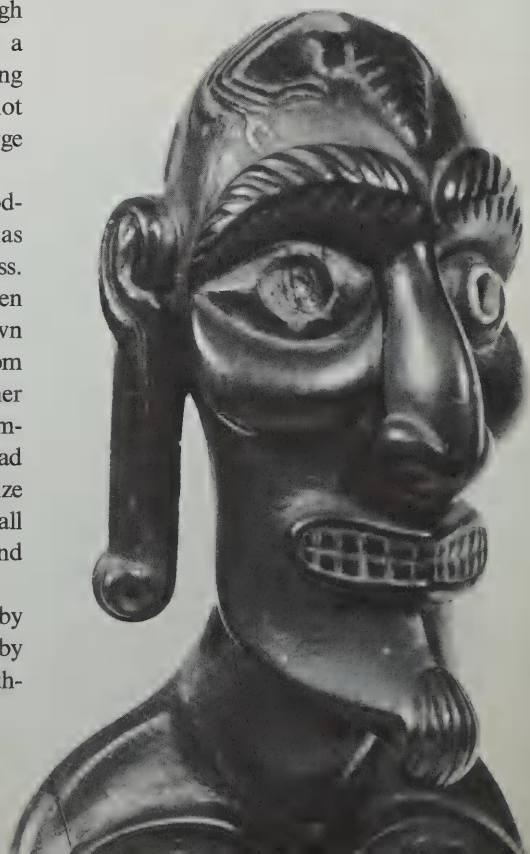


Explorers of many nationalities have visited Easter Island. This picture shows the Russian explorer Kotzebue arriving there in 1816.

thousand miles from Pitcairn Island, the nearest large island to the west, and about two thousand miles from the Chilean coast of South America to the east. It seems most likely that the first Polynesian settlers were unaware of its existence and position until they actually landed there. If so, it was clearly a stroke of luck that they found it at all, although their skillful navigational techniques may have helped a good deal. Once arrived, however, there was no turning back and no going forward, because the island could not provide enough timber for further boatbuilding on a large scale.

Like all the Polynesian islands, Easter Island is the product of volcanic eruptions from the deep ocean bed. It has no connection, ancient or recent, with any great land mass. Volcanic peaks and cliffs dominate the scene, and between them lies an undulating grassy terrain that, although strewn with stones, is quite fertile. Its climate is very different from that of Tahiti, for being some eight hundred miles farther south of the equator it often experiences much lower temperatures. Strong winds blow fiercely up the grass-clad mountain slopes. The only vegetation to grow to any size are a few crooked toro-miro trees, together with small paper mulberry trees that the islanders plant in pits and surround with stone walls.

The way of life of the islanders before it was changed by contact with Western Civilization was briefly described by Roggeveen. There is also an account by another eighteenth-





Easter Island, showing the principal volcanic craters and sites of the *Ahu* statues. The island is some twelve miles from end to end.

century visitor, Captain Felipe Gonzales, from the then Spanish colony of Peru, who arrived in 1770. It is possible to fill in some of the gaps in this basic information by referring to the accounts of various archeological and other scientific expeditions that have since visited the island.

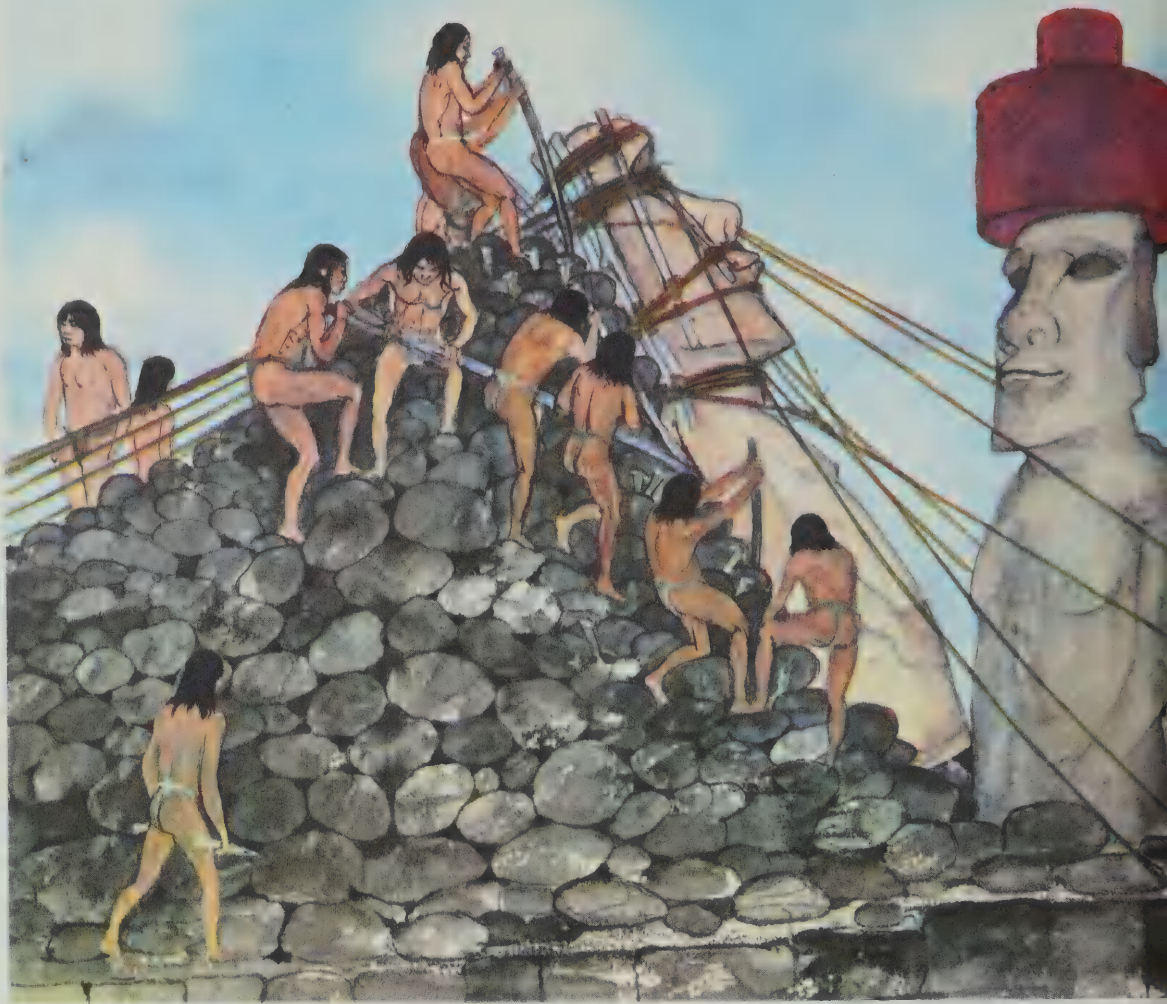
First Impressions of the Islanders

Roggeveen and Gonzales both described the islanders as being well built and tall. The men wore beards, their coloring was fair, and their hair was straight, so that there was no great physical difference between them and other Polyne- sians. Many were also elaborately tattooed, and their ear- lobes were pierced and distended with plugs. When engaged in heavy work they took out the plug and hitched the lobe over the top of the ear.

Some of the islanders lived in caves, but most lived in long, low huts that resembled upturned boats. These huts were sometimes as much as sixty feet long and about eight or nine feet in maximum height and width. They were made of a framework of branches heavily thatched with reeds taken from the swamps that had formed inside the island's volcanic craters. The thatch was secured with cord made from the inner bark of the paper mulberry tree (which also provided bark cloth for clothing). Each hut had only one entrance—a low arched hole. The interior was dark and bare of furnishings other than sleeping mats and stone neck-rests used as pillows. Around each hut there were what Rogge-



Far left: A type of carving made up to 1869. It shows the long-eared ancestor-figure also portrayed in the giant stone statue (left).

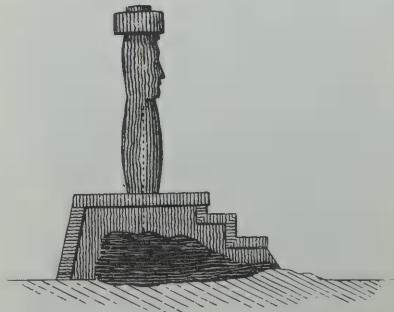


veen describes as “certain big blocks of hewn stone, three or four feet in breadth and fitted together in a singularly neat and even manner.” This is the first reference we have to the skill of the Easter Islanders in working stone.

Finding Food in a Land of Scarcity

Compared with the Solomon Islands and Tahiti, Easter Island is bleak and inhospitable, a land of scarcity. Fortunately, the early Polynesian settlers took with them supplies of animals and vegetables for propagation in their new homes. It is believed that the animals taken included pigs as well as chickens. If so, the pigs did not survive to perpetuate their species on the island, for there were none there when the first Europeans arrived. Chicken meat, chicken eggs, and sea birds’ eggs provided most of the necessary protein food. Among the vegetables, imported or

Artist's reconstruction of the scene as villagers of fourteenth- or fifteenth-century Easter Island erect a giant statue. Once raised, it will be swiveled around to face inland. Then the red topknot of scoria—a lava deposit but differing from tuff—will be gently balanced on top of the head.



This section through an *Ahu* statue, made during La Pérouse's visit, shows that in this case there was a hollowed chamber in the platform.



An Easter Island canoe, drawn on La P rouse's voyage of 1786. It shows the manner of construction that had to use short planks, because there were no tall trees on the island.

indigenous, that Roggeveen and Gonzales saw were yams, sweet potatoes, sugar cane, and bananas, the last grown in hot and sheltered positions out of the wind. Taro could also be grown, but the climate was too cold for the coconut and breadfruit that the Polynesians of more favored islands enjoyed.

The seas around the island abounded with fish, but fishing was not easy. Unlike many other Polynesian islands, Easter Island had no surrounding coral reef to give protection to fishermen. When the islanders went to sea, they were at once exposed to the full force of the ocean waves and swell. Furthermore, the scarcity of wood on the island severely restricted their capacity to build boats. Their canoes were made out of many small slabs of wood from the little *toro-miro* trees, sewn together with tapa cord. They were narrow and leaky, partly because of the limited materials available and partly because the islanders had no convenient material for calking the seams. These canoes, equipped with outriggers to give them stability, were just wide enough to sit in. But more often than not the islanders fished without boats. They gathered bundles of reeds from the crater lakes inland, tied them into rolls pointed at one end, and tucked one under each arm. Then, using these as floats for support, they swam out to sea trailing nets or lines and hooks behind them.

Fishing was restricted to the summer months. In the winter it was taboo, and it was believed that anyone except the king and his family who ate fish during the closed season would be poisoned. At that time even the fishy breath of the royal family was considered deadly, so the king and his relatives lived alone during winter.

Make-make and the Birdman

We have little detailed knowledge about the social organization or the religion of the Easter Islanders, but we do know that they had a priesthood, chiefs, and a king. We know, too, that they had developed some form of script, or at least some form of visual aid to the memory. This was the

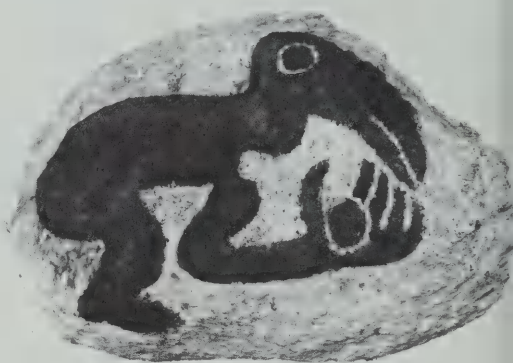




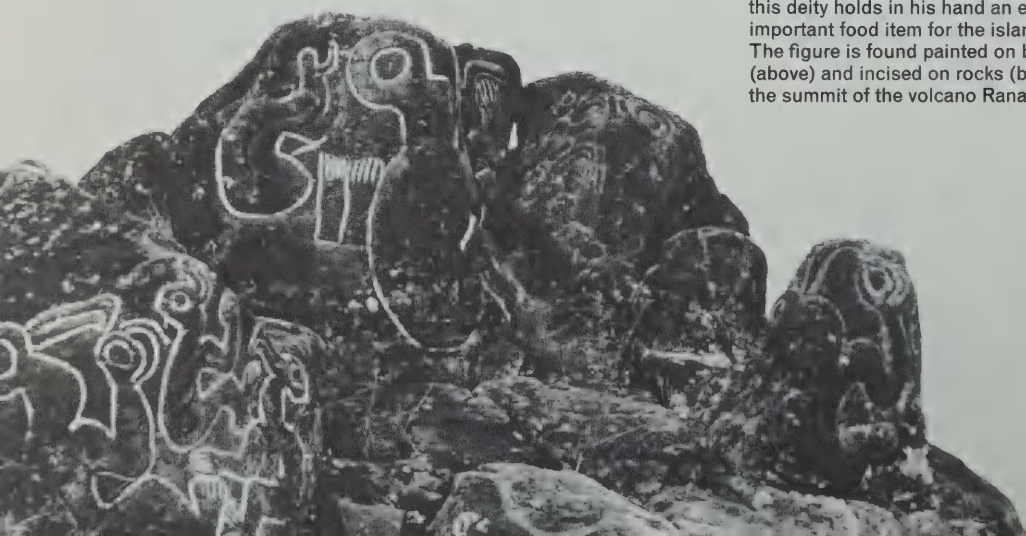
rongo-rongo writing on wooden tablets, which the priests used when saying their sacred chants. Some twenty of these tablets still survive, and they have recently been deciphered. The script was syllabic, and the chants were recorded in a somewhat abbreviated form.

According to island tradition, many sea birds flew around the canoe of the first settlers as they sailed eastward in search of a new home. Boldest of all the birds was a sooty tern. The *tohunga*, or priest, on board dreamed that this bird, inspired by the god Make-make, was leading them to a safe landfall. When the voyage ended in success, it was natural that the islanders began to think of the sooty tern as having some special relationship with the god Make-make. This feeling was probably emphasized by the fact that on Easter Island the settlers relied on sea birds' eggs for a considerable part of their food supply. Out of all this there grew up a special ceremony by which one chief was

One of the surviving *rongo-rongo* tablets, which have recently been deciphered. The words on this fish tablet guided the priests in one of their ritual prayers.



The birdman cult was a part of Easter Island religion. Half sooty tern, half man, this deity holds in his hand an egg, an important food item for the islanders. The figure is found painted on boulders (above) and incised on rocks (below) at the summit of the volcano Rana Kao.



chosen annually to serve for a year as “Birdman”—Make-make’s chief representative and the island’s chief peace-maker.

At the beginning of the breeding season of the sooty terns, all the priests, chiefs, and noblemen gathered on top of a broken volcanic crater overlooking the nearby islet of Motunui where these birds made their nests. The ordinary villagers watched excitedly from a respectful distance. Far below at the sea’s edge stood a group of trained athletes, each representing one of the chiefs gathered above. At an appointed time, soon after the first little cloud of terns was seen making for the islet, these athletes leaped into the sea and raced toward it. Then they clambered up its steep slopes and eagerly searched for an egg. The first man to find one held it high above his head and shouted to the watching crowd the name of his chief, who then became Birdman for the ensuing year.

Easter Island was no peaceful paradise. Wars between villages were common. As was usual in Polynesia, these wars involved the taking of captives who were offered to the gods. On Easter Island this meant that their flesh was eaten with great ceremony by priests and nobles. Yet if the Birdman visited a village his mere presence was enough to guarantee it immunity from attack. As the representative of Make-make, he was feared and honored by all the villagers, whatever else their differences might be.

The Mystery of the Statues

Whether or not the custom had any religious significance we cannot be sure. But at times after the crops were safely gathered in, it seems to have been the fashion for chiefs to bring their villagers together to put up enormous statues to their ancestors. These *ahu* statues, up to thirty feet high, became a source of wonder to the first white men who visited Easter Island. Argument about their origin continued for many years. When Captain Cook first saw them, he felt sure that they were the work of a highly civilized people who had perhaps inhabited the island long ago.

Yet on closer examination many of the problems disappear. First, the statues were carved not out of hard, granitelike rock, but out of volcanic tuff, a mixture of ash and stone that had been hurled out during a volcanic eruption and had since become consolidated. Tuff is soft and easily carved, and is no more difficult to work with than the hardwood used for sculpture on other Polynesian islands. So even with primitive stone implements, the carving of the statues was certainly not an impossible task.



The earliest known statues, like the one shown above, are of short-eared people kneeling in a position of worship. Later came the towering *Ahu* statues. After these followed a decadent period when the big statues were toppled and the islanders took to hoarding precious small carvings in caves (below).





For a long time, the outstanding argument centered on the problem of how the islanders, who had no knowledge of the wheel, transported the finished statues several miles from the quarry to their destination. However, we now know that the density of the tuff is not excessive, and that each statue weighed no more than five or six tons. A few years ago Thor Heyerdahl, of *Kon Tiki* fame, persuaded a native who knew the technique of statue-making to organize both the transport and the erection of a fallen statue. The job was done in eighteen days by twelve men, using only rollers, ropes and wooden poles—proof, it would seem, that no advanced technology was required for their erection.

Heyerdahl has suggested that the Easter Islanders originally emigrated on rafts from Peru, bringing with them their skill in stone-carving. However, this idea is not confirmed by the earliest available accounts of their appearance and characteristics, which bear no resemblance to those of South American Indians. Nevertheless, there are two distinct suggestions of South American influence on Easter Island. One is the presence of the sweet potato, a South American vegetable that is called *kumara* both on the island and in Peru. Another is the growth of certain reeds, used to keep afloat while swimming, which are identical with reeds native to Peru. How these come to be on Easter Island is something of a mystery, and it may be that the whole story of the populating of Easter Island has not yet been told.

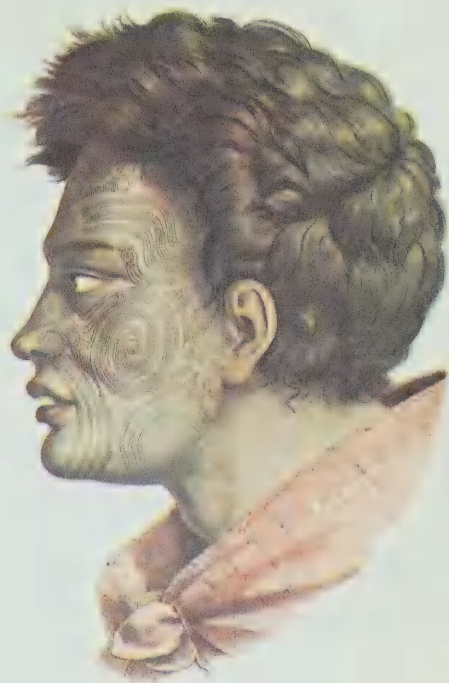
The recent history of the Easter Islanders makes tragic reading. Halfway through the nineteenth century, slave-raiders from Peru carried off about a thousand of them, including the king and his heir, to be laborers in South America. This was probably about one-third of the total population. The Peruvian Government ordered their return, but few survived the return journey, and some of those who did carried smallpox with them. This killed many more on the island, and much of the land was left vacant by the dead.

In the course of a civil war during the eighteenth century, the fine ahu statues had been pushed over by rival groups. Now, in the nineteenth century, the priests and nobles who knew the old legends and ceremonies of Easter Island were wiped out. Missionaries arrived to find the native culture in ruins. What little of it remained largely disappeared when the survivors were converted to Christianity. Today, most Easter Islanders wear colorful European-style clothes. Some are able to earn money by cattle and sheep ranching, or by making imitation ahu statues for export and eventual sale to tourists.

The tallest standing statue on Easter Island. Before it was excavated only the head and shoulders showed, but it is actually thirty-six feet tall.

Maoris of New Zealand

About six centuries ago, according to Maori tradition, a large group of Polynesians emigrated from the overcrowded and battle-weary islands of central Polynesia. But this group did not travel eastward, as did the discoverers of Easter Island. Instead, it sailed in a southwesterly direction, and eventually arrived in the land we now call New Zealand. This may not have been a hit-or-miss affair like some of the Polynesian migrations, for the emigrants may already have known of New Zealand's existence. Both Maori legend and modern archeological research indicate that New Zealand had been reached some centuries earlier by other Polynesian settlers who hunted the moa—a large flightless bird that is now extinct. Word may have got back to central Polynesia about this vast new land that, although cold in the winter-time, was fertile and all but uninhabited. At any rate, the tradition is that six centuries ago a fleet of fourteen canoes, each one hundred feet long and carrying one hundred men and women, set sail from Tahiti toward the new land. The fleet guided itself by the stars at night and the sun by day. If



A Maori chief, as seen by an artist in 1833, on Dumont d'Urville's voyage to New Zealand. His face is finely tattooed in typical Maori style.

Below: A group of Maoris perform a war dance, brandishing their weapons. These include muskets and metal axes received through trade, as well as original clubs and pikes.



the story is true, the final leg of the journey, from Rarotonga to New Zealand, lay across an open expanse of some sixteen hundred miles of the Pacific. This must rank among the boldest ocean voyages of all time. And if the adventurers had not possessed a considerable knowledge of navigation, the fleet might have headed too far south, missing New Zealand altogether and perishing in the Southern Ocean.

Whether or not this legend of the Great Fleet is accurate, it has always been a central part of Maori folklore. For one thing, it provides a plausible explanation for the pattern of their tribal organization. Each tribe was said to be descended from the occupants of a single canoe, and to live in the tract of land near the spot where it made its landfall.

War and Weapons

The fact that the Maori settlers arranged clearly marked tribal territories may have reflected their fear of renewed warfare over land rights in the new country. There was, in fact, ample space in New Zealand for this arrangement to work peacefully and well. But these settlers had come from islands where warfare was part of the way of life, and the urge to fight seems to have remained with them. Wars between tribes became incessant. This state of affairs showed itself even in the way their villages were constructed, for they were commonly surrounded by a stout palisade.

Wars were fought with great vigor and bravery, and they doubtless prevented the Maoris from advancing along the



The Maoris were a warlike people and their temperament was volatile. Sticking out the tongue was a sign of aggression. As a result, the elaborate carving on the prow of a war canoe included the tongue motif (above). Below: Captain Cook's artist drew this picture of warriors in battle array sticking out their tongues. Right: A typical stockaded village drawn in the 1840s. The palisade gave some protection from neighboring tribes.





Maori warrior in full attire. His cloak is of combed flax fibers, and in his hand he holds a special fighting staff.

road to a richer agricultural civilization. But there was always something of the atmosphere of a sporting contest about them. Each tribe kept a careful record of the number of its victories and defeats, and it was a matter of the greatest importance to be in the lead. Yet along with fighting went cannibalism. The biggest insult that could be offered to a neighboring tribe was to eat one or more of its members slain in battle.

In Maori warfare, death and dishonor were not confined to the battlefield. Prisoners were taken wherever possible, and their ultimate fate, if they survived, was to become the slaves of their captors. But many did not survive. Any woman of high rank who had lost her husband in battle could avenge the loss by clubbing a few captives to death. Other prisoners might be eaten by the victors.

The Maoris had no metal, and their principal weapons were clubs made of elaborately carved wood or of basalt, a hard, dark-colored rock. Occasionally, too, they used hard-



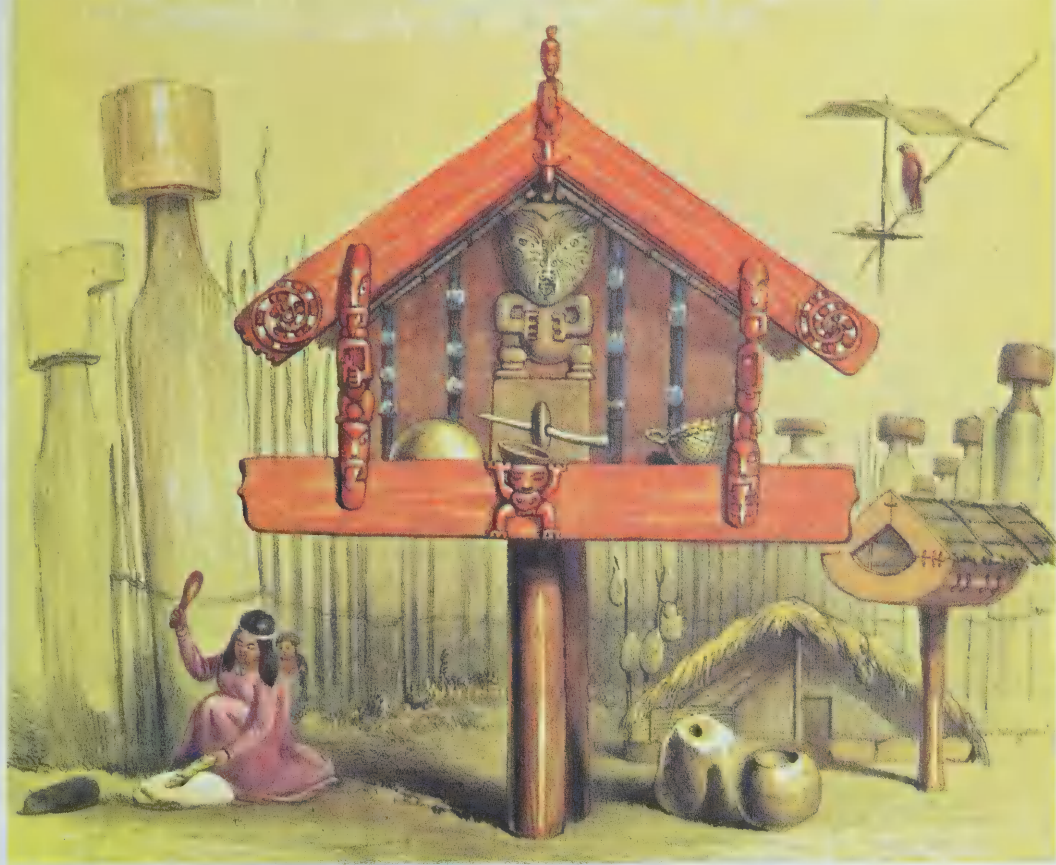
wood staves, or sticks, between five and seven feet long. The forward end of the staff was carved to represent an open mouth with teeth and a protruding tongue, expressive of defiance. Just behind the carving were tufts of yellow dog's hair and red parrot feathers. The rear end took the form of a flat wooden blade. The staff was used in a particular way. The user, often an orator inciting the tribe to war, pointed the tongue of defiance at a mock enemy while making the weapon quiver so that the hair and feathers would distract his attention. If the enemy's eyes wandered for an instant the attacker brought the flat-bladed end over and down on his skull.

Besides various other forms of clubs and staves, the Maoris used slings and stones, and also threw darts. As among the Kenyahs of Borneo, the bow and arrow were unknown.

Life in a New Land

Coming as they did from the tropical islands of Polynesia, the Maoris had to adjust themselves in many ways to the cooler climate of their new land. The single-room houses they developed, for example, were quite different from those





Above left: A Maori house. This one is called *Kai-Tangata* (meaning "eat man") and was built by a warrior who led a massacre of Europeans. It still stands today. This lithograph was made by George Angas in 1846. Angas also drew the chief's raised food-storage barn (above).

of Tahiti. The floor level was cut down into the earth, so that cold air would not flood in. The walls consisted of boarding lined with decorated patterns made of strips of flax or cane. The roof was gabled, and the doorway, entered through a porch, was low, so that it was necessary to stoop when passing in or out. Doorposts and gable ends carried elaborate carvings representing the family ancestors. In these carvings there was a special convention that the bravery and intelligence of the past heroes and heroines of the family should be represented by huge mouths and slanting eyes. Another convention was that carvings of ancestors carried only three fingers to each hand. Maori carving in its heyday was as elaborate as any in Polynesia, and it was all done with adzes made from hard basalt and with chisels made from an even harder stone called nephrite jade.

Left: A carved pinewood slab portraying a female ancestor figure giving birth to the next generation. This would be placed inside a chief's house. The genealogical staff (below) shows the number of ancestors of a chief, the first ancestor being at the left of the staff.

Besides the individual family houses, most villages also contained at least one large council chamber for meetings of chiefs and other members of the ruling class. There was, in addition, a house of education in which the *tohunga*, or priest, taught the sons of the village aristocracy the traditions and legends of the tribe and helped them to memorize accurately the long lists of tribal ancestors. (The lists went



right back to the gods, and the fewer generations there were between a man and the gods, the better was his social position.) Lastly, most villages contained special houses built on stilts, for storing food away from the depredations of rats.

The problem which faced the Easter Islanders—a chronic shortage of wood—did not exist for the Maoris. It is true that they found no trees of the kind they had used for canoe-building in central Polynesia. But here there were giant trees that could be cut into single canoes eighty feet long and eight feet wide.

In their eating habits especially, the Maoris had to make many adjustments to the conditions of their new land. Their ancestors had not been able to bring much of the tropical plenty of their homeland—no breadfruit, no mangoes, and no animals except dogs. But they had brought some roots of taro and yam, and tubers of the sweet potato. The last-named became an important part of the Maoris' New Zealand diet. The sweet-potato tubers are said to have survived the long ocean journey only because the wife of one of the chiefs had the good sense to carry some of them in a belt next to her skin to protect them from the cold. In addition to the items that they imported, the Maoris turned to living on local resources in the shape of forest fruits, birds and birds' eggs, rats, fishes, oysters and clams—and sometimes worms and grubs. The women were responsible for most of the gardening and inshore fishing. In addition, they cooked the food, in typical Polynesian fashion, in earth ovens. The sole drink of the Maoris appears to have been cold water from mountain streams. Unlike most primitive peoples they had no fermented alcoholic drinks.

The new environment also brought about changes in the Maoris' manner of dress. The paper mulberry, from which their forebears made *tapa*, or bark cloth, would not grow in the much cooler climate of New Zealand. However, the Maoris found a plentiful supply of wild flax that they used to develop a substitute. The women collected the flax from the riverbank, then soaked it and beat it to release the fibers. Perhaps because they had never before had to weave fibers or threads into cloth, they never invented the loom. Instead they dried and combed the fibers until they were soft and silky. Then they hung them over a string and tied them across and across with transverse strands at short intervals, so that the flax became like a thin mat. The standard dress that the Maoris evolved for men and women alike was a short flax skirt, or kilt, of this material. In cold weather



Sydney Parkinson, Cook's artist, drew the lively portrait (above) of a tattooed warrior in full regalia. Both sexes were tattooed, the instrument used being a piece of albatross bone. Right: A wooden carving of a warrior with his club.

Neck pendants were highly prized, especially the *tiki* (below). Such figures were believed to promote fertility.





they added a kind of cloak, also of flax. (Children went naked until puberty.) Garments were decorated with borders embroidered in simple triangular designs of red and black. For persons of high rank, cloaks were decorated with overlapping feathers, so that the entire surface was covered.

Perhaps decoration of the skin was considered more important than decoration of clothing, for the Maoris were often heavily tattooed on both the body and the face. The tattooing they practiced was not the comparatively simple puncture technique found in Tahiti. It was produced by slashing the skin in long curved lines to form elaborate patterns—as if the human body were a piece of wood to be carved. Both men and women underwent this extremely painful process.

Maori and White Man

The Dutch explorer Abel Tasman was the first European to discover New Zealand. He first sighted the South Island in November 1642. In December of the same year, while at anchor off the North Island, a number of Tasman's crew attempted to land. Their boat was attacked, and they were forced to withdraw. Tasman confined himself to observing the new land from a safe distance and never did set foot in New Zealand, although a landing party from his ships did so in search of fresh water. More than a hundred years later, the islands were visited by Captain Cook, who had numerous skirmishes with the Maoris. By the end of the eighteenth century, traders and missionaries were occasionally landing with success. They gave the Maoris guns, and from that time on the constant warfare between Maori tribes became far more deadly. As a result, it is thought that over half the Maori population was wiped out.

In 1840, New Zealand was officially annexed to Great Britain. Much of the tribal land was bought by the new settlers and intertribal warfare was put down. During the rest of the century, many Maoris, thrust out of their tribal lands, worked as laborers. During this period their numbers dropped still further, to about forty thousand. Since 1900, however, the fortunes of the Maoris have improved and their numbers are at the present time increasing. They are largely resettled on their own lands, where the majority are farmers, quite independent of Europeans. Others have become wholly integrated into the society of New Zealand's white settlers, and are able to practice any trade or profession. Some are doctors, others lawyers, and there are four Maori Members of Parliament.



This painting, by Alexander Buchan, an artist who accompanied Captain Cook to Tierra del Fuego in 1769, shows a newly made hut of typical Yamana type. The artist's cutaway style exposes the hut's interior (contrast the photograph on a Yamana hut on p. 164). The household fire, from which Tiera del Fuego takes its name, is prominent in this illustration. It was indeed a vital part of the Yamanas' life, for they lived farther south than any other people. The photograph below shows Beagle Channel, northernmost limit of the Yamanas' homeland.



5 LIFE ON THE COASTS

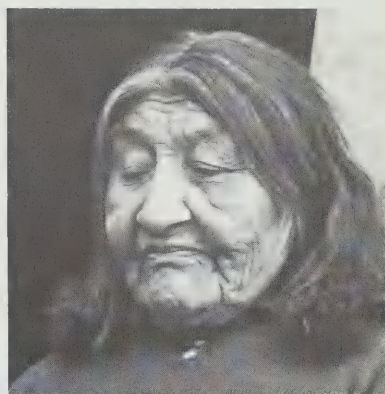
Yamanas of Tierra del Fuego

It is not only people who live on oceanic islands who find their way of life largely dominated by the sea. In this chapter we shall meet three peoples living on, or just off, the coastline of the great American land mass. Although they differed from one another in many ways, these societies had one thing in common. They all depended mainly on the sea for a living and made comparatively little use of the land.

The Yamanas, or Yaghans, lived in the south of the cluster of islands that are separated from the southern tip of South America by the Strait of Magellan. The Portuguese explorer Ferdinand Magellan, who discovered these islands in 1520, named them Tierra del Fuego—"Land of Fire." The shores were everywhere dotted with the bright woodfires around which the Yamanas and neighboring tribes were encamped. The name was an apt one, for fire was indeed important in Tierra del Fuego, not only because of the bleak climate but also because it was employed in an unusual kind of hunting. At night Yamana hunters carried flaming torches in their canoes and approached rocks haunted by sea birds. The birds, dazzled by the light, would fly blindly toward the canoes and were fairly easily caught.

Hard Land and Hardy People

Tierra del Fuego lies mainly between latitudes $52\frac{1}{2}^{\circ}$ and 55° S.—as far to the south of the equator as central Labrador is to the north. The average winter temperature is only a



Last of the Yamanas, this old lady, photographed in 1963, holds in her mind secrets of a way of life that is gone forever. She is known as Grandmother Chacon, is over eighty, and has learned to speak English.

Map of the Yamanas' homeland (brown), showing also their closest neighbors, the Alacaluf (black). This was in 1850, when some three thousand Yamanas survived. In 1925, only fifty remained.



degree or two above freezing point, and summer temperatures seldom rise above 60°F. This cold land is also one of the stormiest regions of the globe. The islands are lashed by gales bearing rain in summer and sleet or snow in winter, while strong tides constantly swirl through the numerous channels of the sea.

The scenery is gaunt. In some parts of the islands the old mountains, covered in ice at some remote time in the past, have been rubbed and shaped into rounded hills of bare rock. Much of the remaining land is covered with a dense scrub of beech forest, often so thick that one could almost walk on the tops of the mass of stunted and tangled trees. Only here and there, toward the eastern end of their territory, did the Yamanas occasionally enjoy the sight of a stretch of grassland where the occasional gaunaco, or wild llama, was to be found. In a land such as this, the human inhabitants were forced to make a living from the coast, mainly because it was only there that they could move about freely in search of food.

The few white people who came into contact with the short, wiry, copper-brown Yamanas before the end of the nineteenth century were struck by their sheer physical toughness. Charles Darwin, the great British naturalist visited Tierra del Fuego in the 1830s. He was impressed by the fact that, in spite of the harsh climate, they wore very little clothing, although there were materials available for making more. Some of the older men had knee-length



Buchan's painting of a Fuegian woman shows her in a knee-length cloak of guanaco hide. The large barb on her bone-tipped spear made this a useful fishing implement. In 1831, Darwin visited Tierra del Fuego. His ship, the *Beagle*, is seen at anchor below.



cloaks of seal or guanaco skin. The younger males usually wore only a tiny square of skin over the shoulders, moving it from one side to the other according to the direction of the wind. The women sometimes wore a little apron of bird-skins, but more often they went naked. However, the Yamanas doubtless gained some protection against the cold from the practice of painting their bodies with a mixture of fish oil and red ocher. Often they added stripes or patches of other colors that were made by mixing grease with charcoal, or with a very soft white earth. Body-painting, it seems, was the main form of personal adornment, for other personal decorations were few. Still, they had necklaces and wristlets of small bright shells threaded on animal sinews, crowns of white sea-bird feathers for the men, and skin headbands for the women. In only one other respect did the Yamanas show any special regard for personal appearance. They carefully pulled out every trace of body and facial hair, sometimes including even the eyebrows.

In spite of their scanty clothing, the Yamanas seem to have adapted themselves well to the climate they lived in. On the rare occasions when the temperature rose to about 60°F. they even felt uncomfortably hot. But for a great part of the year, temperatures were very far below that level, and even the hardy Yamanas needed the warmth of a fire. In a few places flint and iron pyrites were to be found, and a spark could easily be struck from them. More often the Yamanas made fire by rubbing hardwood against softwood until the softwood began to powder, and the powder began to heat up and smolder. Then, by adding a little dried grass and blowing gently, they could make a small flame spring up. However, in Tierra del Fuego conditions were often too wet and stormy for fire-making. Thus, when moving camp overland from one beach to another, the women carried smoldering brands of wood with them. If journeying by canoe, they kept a small fire going on a piece of turf.

It is true that the Yamanas would sometimes go inland to hunt the guanaco. But it was the seashore that yielded them a regular supply of food—mussels, limpets, and sea urchins. And the offshore waters offered frequent opportunities to hunt seals and sea lions, as well as penguins and other sea birds. The Yamanas knew from experience that it was profitable, in the long run, not to stay so long in one place that the game animals became easily frightened. They also knew it was wise not to overfish the mussel and clam beds in the island bays. They worked these beds in moderation, in order to leave a breeding stock for the future. As a result, they were forced to lead a nomadic life, moving camp from



Today, fishing for mussels continues as it did in the days of the Yamanas. Above: An Alacaluf fisherwoman in her plank canoe ties up before landing her catch. In her boat she has two model bark canoes. Below: An Alacaluf man hauls in mussel kelp. The Fuegian fisherfolk have been careful not to exhaust the mussel beds by overexploitation. They have managed this by moving from beach to beach as the supply fell. As a result, their food is safe.





time to time whenever they felt they had sufficiently exploited the local food supply.

For this reason they were content with shelters whose main virtue was simplicity of construction. The framework of each hut was made by standing a number of slender poles from saplings in a ring. Then they bent the tops together and secured them with fibrous roots and creepers. This framework was then covered with skins and slabs of beechbark. The coverings were precious possessions, to be carefully preserved and taken along from place to place. But the framework of each hut was simply abandoned, to be used again by anyone who might need it in the future. The hut was entered by a small hole, just big enough to crawl through, and in the center a small woodfire was kept burning. This supplied the Yamanas with what little warmth they needed and also helped to keep away insects.

On the western coasts of Tierra del Fuego, the Yamanas were organized in small family units. Each went its own way and lived almost exclusively by fishing and seashore foraging. Further to the east, where scattered grasslands offered opportunities for inland hunting, groups were considerably bigger. There each community consisted of a group of

An early photograph, taken in the 1880s, of a Yamana mother and her child outside their living shelter.

Above right: A Yamana basket, made in the "half-hitch" style of weaving. It was manufactured of a coarse grass, first chewed by the women in order to flatten it and make it more pliable. After a small coiled base was made, a series of loops held the upper coils in place (right).

The Yamana bark canoe, made from the evergreen beech. The bark had to be stripped in the spring, when the sap was rising, and a whale's jawbone was used for this. Three big pieces of bark were sewn together to make the boat. Right: The dugout is common today among the Alacaluf, because they have the use of metal tools.



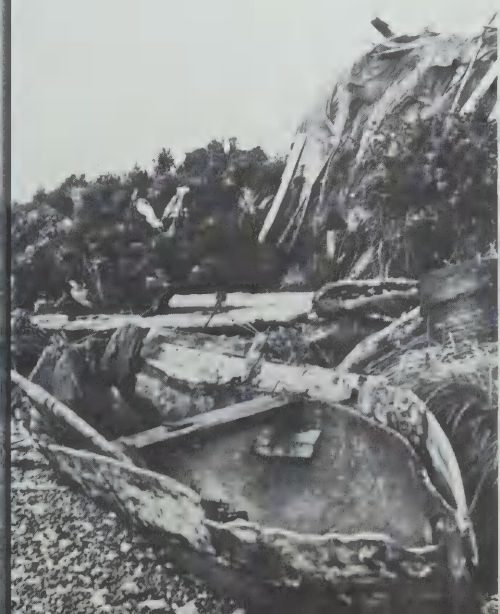
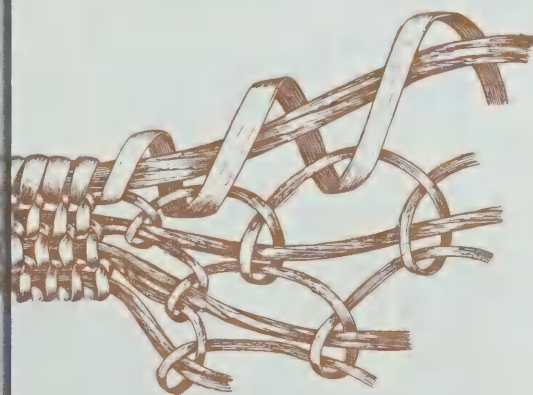


interrelated families numbering between fifty and a hundred individuals, housed in ten to thirty huts. These communities seem to have been of an ideal size for making the best use of the fishing and hunting grounds. They also provided some collective security against attack. No settlement was permanent and no group claimed exclusive right to any particular area of land or sea. But while a group was actually occupying a site, no other group was expected to trespass on its immediate territory. Such an event did not often occur, but when it did, the first group would take up arms in defense of its rights. Their weapons—used more for hunting than fighting—consisted primarily of beechwood bows with strings made from twisted guanaco sinews, and arrows that were often without feathered flights. They also had beechwood spears with stone or bone tips, and knives consisting of sharp shells hafted onto stone handles.

Exploiting the Coastline

Although fairly peaceable among themselves, the Fuegian tribes were a danger to early mariners, especially those making the passage of the Magellan Strait. In these dangerous waters many a ship was wrecked or blown ashore, only to be plundered by the natives. For centuries, too, the Strait was not well provided with lights, and the strong currents and poor visibility made it necessary for ships to anchor there for the night. Such ships were liable to attack, and a number of lives were lost to Fuegian arrows and spears. Yet there was one man who, sailing singlehanded through the Strait, anchored there every night and managed to sleep in safety. This was Joshua Slocum, an American who sailed alone around the world in his yacht *Spray* in 1896. His answer to nocturnal attacks was to sprinkle his deck with carpet tacks before turning in. Even the horny-skinned soles of people who spent their lives barefoot were not tough enough to overcome this form of defense!

The most important property of any Yamana family was its canoe, which might be either of two kinds. The early type of boat the Yamanas used was small and simple—a canoe made of sheets of bark sewn together and held in place around a frame of flexible saplings. Later, in the 1880s, the introduction of metal led to the independent invention by the Yamanas of the dugout canoe. Indeed the actual inventor's name is known. He was locally called John Furness, and he lived near the village of Ushuaia. The nearby Alacaluf, who had used plank canoes, soon seized on the idea of the dugout hull and adopted it. Both tribes would



often raise the sides of their canoes by nailing on boards. Besides being unstable, beechbark canoes and the later dug-outs tended to be leaky affairs. But the occupants kept them dry inside with the use of bailers made of bark. The canoes were driven by rather short, slim paddles, sometimes no more than three feet long.

Boatmaking was man's work, as were toolmaking, hunting, and fighting in case of trouble with other tribes. The women skinned and cut up meat, made fur garments, and prepared bowstrings from animal sinews. Women were also the expert fishers and divers. They could go down to over sixty feet to scrape up sea urchins and shellfish, which they carried to the surface in baskets made from creepers. Having provided most of the food, the women were also responsible for cooking it, although the Fuegian idea of cooking was not much more than warming up food. And after that it was the men who ate first and the women who took what was left.

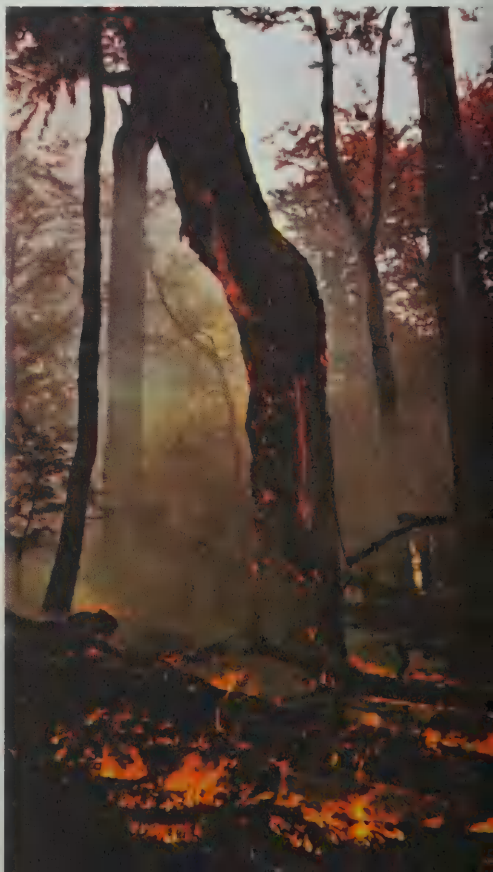
Each father was undisputed head of his family, but there was no one who could claim comparable authority over a whole community. The leader of the group was not a true chief, but just a man who commanded people's respect.

The End of the Yamanas

Although their land was hard and had little to offer, the Yamanas, and other Fuegian tribes had learned to make the best of it and even to enjoy life. Until the nineteenth century they fiercely and successfully resisted all the attempts of white men to settle there. Then, however, encroachment began from friendly missionaries based on the nearby Falkland Islands, and also from less friendly gold prospectors and sheep farmers. One of the missionaries, on retirement, set up a sheep ranch near Cape Horn, where his family grew up among the Ona—the Yamanas' northerly neighbors. It is from this family that much of our knowledge of the Fuegian way of life derives. Some of the white sheepfarmers, fearful that the natives would interfere with their stock, put a price on Indian heads. Many were killed, and most of those who escaped were finally put on mission stations by the Argentine government. There, unaccustomed to indoor life and to being overclothed, a great many succumbed to tuberculosis or to influenza epidemics. A visitor to the islands in the 1920s reported that only some hundred Yamanas were left in existence, and that these few were no longer living the traditional Fuegian life. In the 1960s it can be said with certainty that the Yamana way of life has gone forever.



Body painting was one of the few art forms practiced by the Yamanas. Here we see four varieties of face painting, all concerned with funeral rites and the accompanying dances.



Today sheep farming is common in Tierra del Fuego. To clear the land, farmers must first destroy the beech forests, which they do by burning.

Haidas of British Columbia

As far to the north of the equator as the Yamanas were to the south, live the Haidas of Queen Charlotte Islands, off the coast of British Columbia. These, too, are a coast-dwelling people who obtain their food mainly from the sea. Yet it would be hard to find a greater contrast than that which exists between the two tribes. We have seen the cultural poverty and tough simplicity of the Yamanas' way of life. But here off the Canadian coastline, where nature is less harsh and the sea more bountiful, we find a society whose ability to exploit the environment is so great that a food surplus is produced. This has left time and energy for the development of a complex class system, considerable artistic skills, and a rich mythology.

There is some doubt as to whether the Haidas were observed by Captain Cook on his travels along the west coast of North America in 1776. However, in 1787 the Englishman Captain Dixon journeyed to the Haidas' homeland, took the islands into the possession of England, and gave them their present name. He found it easy to trade with the Haidas for sea-otter furs. Trading was an established custom that had already been going on between the Haidas and their mainland neighbors long before the arrival of Europeans. The people Dixon saw were tall, well built, and of fair complexion. He also learned that they could be treacherous, for one moonless night a Haida raiding party attempted to cut his mooring ropes in the hope that his ship would be dashed to pieces against the rocks. The plan, however, was foiled by one of the Haidas themselves, who warned the captain.

The Haidas in Peacetime

The Haidas built villages consisting of one or more rows of houses facing seaward on a beach. These were inhabited primarily in the wintertime. Each spring the families scattered to the clan's hunting and fishing grounds to obtain food for the coming year. In the forest the men hunted deer, marten, and occasionally bears—asking pardon of the



Portrait of a Haida woman, carved in wood. The face is handsome with fine features. It has been decorated in the tribal manner.



Most of the Haidas live on the Queen Charlotte Islands, but some of them inhabit Prince of Wales Island to the north. The map (above) shows their distribution, and that of their neighbors.



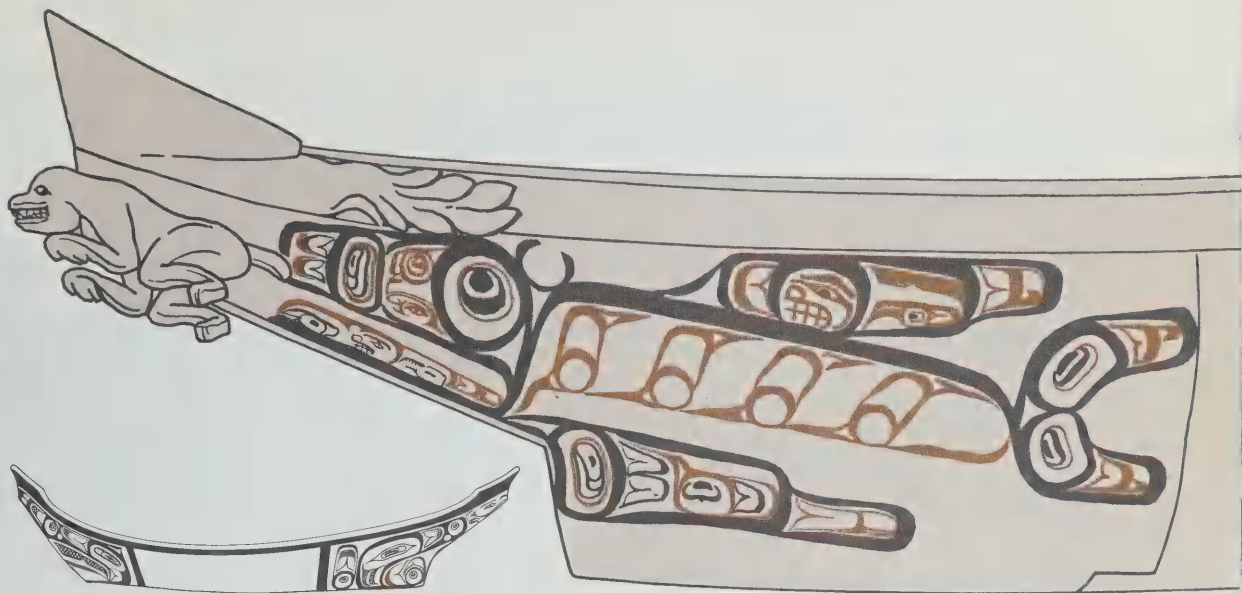
This photograph was taken in 1878. It shows the façade of Skidegate village, with canoes drawn up in front of the owners' houses.

All Haida villages were built near the edge of the forest, from which timber was brought for the boats, houses, and totem poles.



spirits before killing them. There, too, the women would gather wild berries and honey. But forest foods were really of little importance to the Haidas. Their life was closest to the sea, and the sea was their great provider. Most of their meat came from seals, sea lions, dolphins, and sea otters, and they had fish in abundance—the oily eulachon, halibut, and, in season, more salmon than they could possibly use. Sometimes the sea even supplied food without any effort on their part, for every now and then a whale would be stranded on the beach. Soft sea grass growing on the shoreline was gathered as a vegetable. Kelp, or seaweed, provided raw material for making fishing lines and ropes, although some of these were also made from cedar bark.

The fine fibers of shredded cedar bark also provided part of the material used in making clothes. This was women's work. Using beaters made from the bones of whales, they separated the fibers from each other and then twisted them with wool that they obtained by combing their pet dogs. Twirling a wooden spindle with a carved whorl of wood against her thigh, the woman next spun the mixture of fibers into a tough thread. This could then be dyed by boiling it with berries and lichens. Then the threads were looped over a pole so that they hung down in a long fringe on either side, and warp threads were finger-woven across them. In this way, without a loom, Haida women were able to produce a very beautiful, although coarse, cloth that was warm enough to protect them from the winds, rain, and snow of the North Pacific winter.

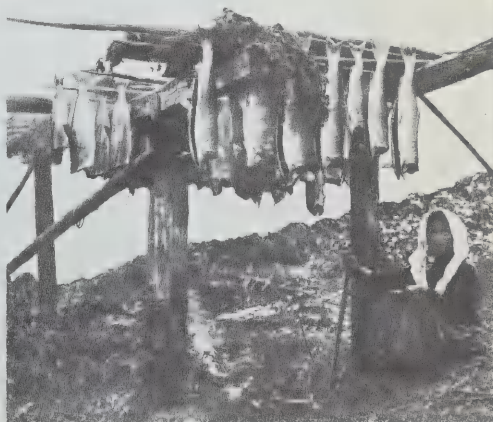


The Haida men made magnificent dugout canoes, the largest being the war canoes for one hundred persons with all their equipment. For normal everyday use, twenty- to thirty-seaters were more common. There were also small fishing canoes, designed to seat no more than four people. Each of the larger dugouts was made from a single trunk of a giant cedar tree. First a good, straight tree had to be found growing near the sea. Then, having made offerings to the tree's spirit and to their own protecting spirits, the men set fire to a ring of logs laid around its base. As the wood at the base of the trunk charred, the men hacked at it with heavy adzes whose blades were made of diorite—a very hard crystalline rock. When the tree was felled, it was propped up on logs, hollowed out, and allowed to dry very slowly to prevent splitting. Gradually the outside was shaped with adzes, until there was a rising, sharp-pointed prow and a more blunt stern. When the hull was judged to be thin enough, it was thoroughly wetted and timbers were forced in between the sides to spread the gunwales farther apart. Then, after a period of drying and testing, the prow and stern were carved and painted with representations of the totem creature to which the canoe was dedicated. The boat was a sacred thing to the Haidas, as well as the main instrument for earning a living. Finally it was oiled all over and launched into the sea.

Occasionally young Haida braves went out hunting the killer whale. This was not part of the food quest, for the Haidas had food in plenty without the need to hunt such a

Both prow and stern of war canoes were carved and painted in traditional clan motifs. Above: A prow painted with a killer whale design. Inset: A typical war canoe, decorated with the black whale motif. Such a canoe would be fifty to sixty feet long.

Fish provided a large proportion of the diet of the Northwest Coast Indians. Salmon were taken in nets as they swam up inland creeks, and smoked by the women over slow-burning fires.



dangerous creature. However, the killer whale had bones that made fine strong handles for tools, and excellent creamy ivory teeth that could be carved and worn as pendants by chiefs and nobles. But the hunt for the killer whale was essentially an adventure, undertaken mainly for the thrill it provided. The young braves set out armed only with bone-pointed spears and a great deal of hope. The exciting moment came when they had to paddle their canoe out of danger of the wounded creature's whirling tail flukes. Many young warriors died in such hunts, but more returned to tell of their triumph.

Normal food fishing was a quieter affair. Seine nets with stone sinkers were dragged between two or more boats toward a school of fish that could be seen jumping. The canoes encircled part of the school with the net and then gently started toward the shore, where the women and children were waiting to haul in the catch. Most of the fish were later dried on huge wooden frames. Finally they were distributed, in proportions decided by the chief and his council, among all the village households. Eulachon fish were not dried, but were placed in trenches and toasted. A thick, clear, golden oil melted out of them drip by drip and was gathered and stored carefully in sealed wooden bowls. Although they were unaware of it, this fish oil kept the Haidas in good health all the year round, especially during the dark winter months when they most needed its rich store of vitamins. The commonest fish of all was the salmon. Many thousands were caught in the inland creeks as they made their way upstream on their journey—according to Haida folklore—to the creek woman who inhabited the head of the river and owned all the fish in it. Thus, before fishing, the Haidas said propitiatory prayers to the local creek woman and even to the fish themselves.

To the Haidas such a practice came naturally, for Haida



Above: One design for a shaman's rattle shows Raven, ancestor of half the Haida people. In his beak he has an object, possibly the sun. On his back is a shaman who is getting medicine from a frog.



Left: The "Bear Mother," carved in black slate by a Skidegate artist. It illustrates a legend about a woman who was punished for ridiculing bears. She had a child with the strength and instincts of a bear.



A Haida dance rattle. The design represents a legend that tells how frogs and toads come with the rain.

religion gave a spirit to each bird, mammal, and fish. Animals could and did turn themselves into human beings, and every kind was incorporated into legends describing its strange experiences in bygone times, and how it came to be associated with a particular clan or group of people.

The Haidas at War

Despite the fact that the sea, the shoreline, and the inland forest provided a bountiful and easy living for the Haidas, they were a people who were all too ready to go to war. Each village along the coast took a special pride in its own particular ancestry and its chief. There was always a danger that some of the young men might try to demonstrate their village's superiority over a neighboring village by killing some of the aristocrats of that village and stealing their crests. To do this was to acquire their titles. When this happened, insulting messages would be sent from one village to the other and further raids would take place on both sides. Finally, during the winter, a serious war expedition would be planned.

On the day appointed for the war raid, the warriors divided into two groups. The bravest set off in the great war canoes, taking a priestlike shaman with them to predict what would happen and to kill the souls of the enemy. At crack of dawn, the war canoes approached the beach in front of the enemy village. Meanwhile the main body of warriors landed farther up the coast and approached the rear of the village silently through the woods. They all wore wood and leather helmets, intricately carved. And in addition to their body tattoos, they were painted with totemic crests. With a shout, the sea party landed, making as much noise as possible and trying to set houses on fire. The sleepy defenders, caught unawares and unarmed, were attacked as they left their burning homes. As the slaughter began, the killers from the woods would break into the back of the village, storm the defensive palisade, and attack from the rear. If the raid was successful, many of the enemy were killed and their heads hacked off and bundled into the canoes. Any women and children who could be caught were tied up to be carried off as slaves.

Let us try to see these war raids as the Haidas saw them. To do this, we must understand something about the fabric of their society, and the value they placed on different forms of behavior. We saw earlier that the pueblo peoples, such as the Hopi, have built up a farming civilization in a near-desert habitat. To do so was a collective task, and they have been almost compelled to stress the social value of cooperation



Wooden figure of a Haida chief. His headdress and apron are adorned with totemic crests, and he wears a cape. In his right hand he holds a rattle, symbolic of high status.



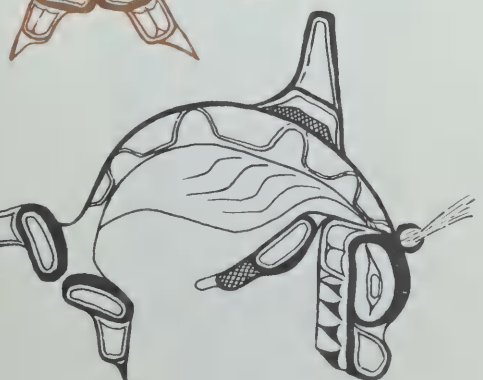
and to frown on individual ambition. The land of the Haidas, by contrast, offers abundant material rewards in return for comparatively little effort. There is no need there for a society to organize individuals closely for collective work. There are several possible responses to a social situation of this kind, and the one followed by the Haidas was to place great value on the spirit of competition. They came to respect the strong-willed, aggressive person—the man who put fear into the hearts of other men. They had no respect for the quiet, gentle type who put the good of others before his own interests. In fact, their whole social system was geared to the idea that people fall into rival groups and should compete with one another for particular ends.

The Great Status Race

The entire Haida tribe was divided into two groups: the Ravens and the Eagles. Every person was one or the other. Membership passed through the female line, so that a person belonged to the same group as his or her mother. Marriage was restricted to members of the opposite group. Within each of these *moieties*, as anthropologists call them, were a number of clans, each of which formed the basis of a village. The village clan owned tracts of sea and land and had its own special totemic crests and myths. There was a high-ranking branch of the clan to which the village nobles and the headman himself belonged. Each of the aristocrats possessed titles, honorific names, and crests connected with his status. In a land where material resources were there in plenty for the mere taking, these intangible possessions were prized above all else. It was on these that the competitive Haidas concentrated their greatest endeavors.

Apart from killing a man and stealing his crest, the only way of gaining titles, status, and prestige was by the amassing and subsequent giving-away of certain goods—notably blankets. This process, which came to be known as the *potlatch*, became a sort of tribal obsession with the Haidas, a focal point of their whole thinking and way of life. There were many different kinds of potlatch, and the most impressive were those when village pitted its resources against village. A single intervillage potlatch might involve a year of continuous planning and effort. Meanwhile, within each village, individuals were busy potlatching against each other, upholding their own status or seeking to improve it.

One occasion for holding a potlatch was the building of a new house, probably to be shared by four related families. In this case the potlatch would be organized by the man of the most important family. A full year before the ceremony



Above: Haida motifs. Each is a family crest. From top to bottom: dragonfly, eagle, and five-finned whale belong to the Eagle clan; killer whale and skate (right) are Raven crests.



itself, he would begin borrowing property from all his relatives in the same clan as himself, in order to be able to give away as much as possible when the time came. Although this seems an extraordinary procedure, there was a good reason behind it. Everyone to whom he made a gift at *his* potlatch would be expected to return it with high interest at some subsequent potlatch.

Before the guests began to arrive for the potlatch, most of the building work on the house would already have been done. Great cedar trees had been felled, corner posts and roof beams made and erected, planks for walls and floor cut to shape. The house was a large structure, forty feet long and twenty feet deep, screened off into four rooms, one for each of the families that were to occupy it. At the sides and back there were great covered platforms, where people could sit and work in winter, sheltered from rain or snow. A loft was constructed for storing surplus food and clothing. And in the middle of the sloping roof a square hole was left to allow light to enter and the smoke from the family fires to escape.

Not only was the house itself almost complete, but so also the great housepost, or totem pole, somewhat taller than the house. Expert carvers, working with small adzes, had carved stylized representations of the ancestral clan symbols to make the totem pole. Each house pole was unique, although many followed a similar plan. At the top was carved the emblem of the man's own clan, then those of his mother's and his grandmother's clan, and then the emblem of his own clan once more. One, for example, might show a human figure wearing a Raven mask at the top, then Bear and Killer Whale, and finally Raven again.



Wood carving was an integral part of Haida life, and the conventional clan symbols were familiar to everybody. Each family had its own chest for storage (left) and totem pole (above, seen in a scale model made by a Haida carver).

Above right: For the potlatch ceremony, Haida chiefs dressed in their finest blankets, imported from their mainland neighbors. They assembled to receive valuable gifts, such as the "cooper" (right), from the potlatch donor. These gifts had to be amply repaid at a later potlatch.



When the time came for the potlatch, little remained to be done except to push the housepost into position. This had to be done by the man of the leading family of the house, to show that he was master. Then all was ready for the potlatch. Crowds of men had come in from miles around. In strict order of status, each was now presented with a gift, the best things going to those of highest rank. In most cases the gifts would consist of blankets. But if the host was a member of a wealthy clan he would take great pride in offering more valuable things to his guests of honor—perhaps a slave or, what was even more valuable, a handsomely styled piece of copper. These, the most precious of the Haidas' possessions, were finely decorated objects, about



Above: A carving in slate of a hunter rescuing a woman from a bear. He has thrust a spear deep into the bear's belly. Sculptures such as this show that the Haidas, despite their preference for conventional styles, were also able to make realistic works of art.



three square feet in area, in the shape of a shield designed with totemic symbols. They came to be known as "coppers." Then followed a great feast of dried berries and smoked fish. Each guest took as much as he could eat and dipped the food freely into wooden bowls filled with eulachon fish oil. No women attended the feast, but any man was welcome to take home as much food as he cared to for his wife. The only requirement was that the bowl in which he carried it be returned to his host before sunset. By the time the present-giving and feasting were ended, the host had probably all but exhausted his material resources. But if he had proved himself wealthy and a lavish giver of gifts he had made a great status investment. To the Haidas, that was what mattered.

When white men came to the west coast of North America, the Haidas became richer than ever before, as the result of new trading contracts. As a consequence the potlatch got out of hand. Whole villages, represented by their chiefs, engaged in vastly wasteful potlatches against each other. Property was not merely distributed in an orgy of giving, but destroyed. Oil, that valuable winter food, was thrown on the fire and burned. So were blankets. Slaves were killed and their scalps thrown insultingly at the rival chief. "Coppers" were flung into the sea. In some cases, property accumulated painstakingly during an entire lifetime was destroyed, all of it, at one spectacular potlatch. And all this was simply to gain the upper hand in the status race. Meantime—another index of the swelling pride of the people—totem poles grew in size. It was now easier to carve them with the new metal tools the white man had brought for trading purposes.

Then the inevitable happened. The white man had also brought diseases to which the Haidas had no immunity, and some of these diseases, especially smallpox, struck them down. In 1841 the total Haida population was estimated to be eighty-three hundred; forty years later it was around twenty-five hundred; and by 1905 it had sunk to nine hundred. Warfare had by then been suppressed by the Canadian Government, leaving the potlatch as the only legitimate form of competition. So, for a while, as the Haidas declined in numbers, the survivors grew richer and richer. Feasts became more common, and more property was destroyed than ever before. But ultimately, with fewer and fewer people competing for titles, the titles themselves became less desirable. Today, although there are still some seven hundred Haidas on their reservation, potlatching is largely a thing of the past.

Did this Haida artist have in mind his own matriarchal society, or a rather henpecked husband, when he carved this visiting English couple?

Copper Eskimos

The Eskimos, a Mongoloid people who live in scattered groups along the Arctic coasts of North America and Greenland, were the first natives of the New World to be found by Europeans. Viking settlers met them in Greenland during the Middle Ages. The Northmen were eventually overcome by them when deterioration of climatic conditions, coupled with political events in Europe, cut off the Viking colony from its home base.

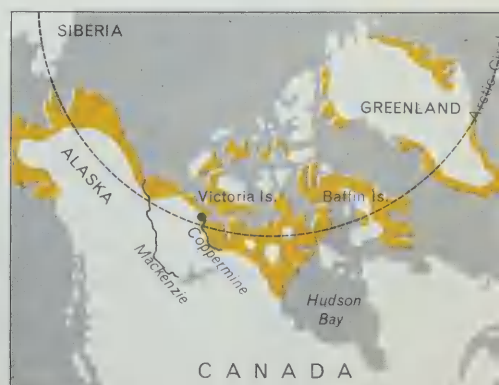
The Greenland Eskimos were rediscovered by fifteenth-century European explorers shortly after Columbus made his first great westward voyage. During the next two and a half centuries there were many contacts between Europeans and Eskimos living in other areas. Fishermen occasionally met Eskimos along the northeastern coast of Canada. Explorers searching for the Northwest Passage came into contact with Eskimos as far west as Hudson Bay—the practical limit of navigation. And somewhat later Russian fur traders from Siberia set up trading relations with the western Eskimos of Alaska. But there were other Eskimos, including the Copper Eskimos, who lived along parts of the northwest Canadian coast that are inaccessible from the sea. It was not until the late eighteenth century that land explorers first made contact with them.

From the middle of the nineteenth century onward, the Copper Eskimos were visited by a number of travelers and explorers. But no regular contact was established until less than fifty years ago, when the Hudson's Bay Company set up a trading station on Copper Eskimo territory. A mission was also established there. At about the same time, a scientific expedition visited the area and made a detailed study of the native people. From the reports of this and other ex-



A pencil drawing of an Eskimo mother and child brought to England by Frobisher after his expedition to Baffin Island in 1577. These and many others taken to Europe died on exposure to diseases to which they had no immunity.

Map showing the range of the Eskimos. The Copper Eskimos live near the Coppermine River in Canada's Northwest Territories.





peditions, as well as from the observations of the early explorers, we can reconstruct the life of the Copper Eskimos before the white man came their way.

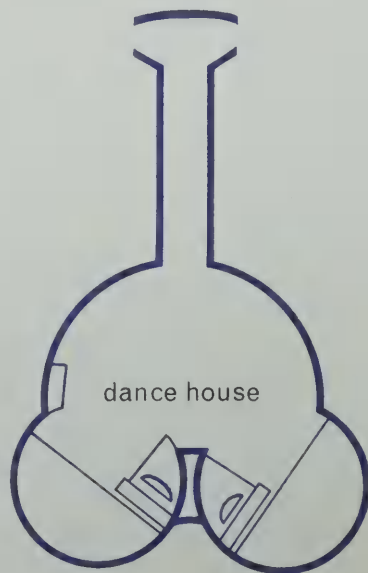
Where Land and Sea Look the Same

The Copper Eskimo territory lies near the mouth of the Coppermine River, well inside the Arctic Circle. It is a land of short summers and long icy winters. In the three months or so of summer, although average day and night temperatures rise only a few degrees above freezing point, it is a land full of short-lived flowers and mosquitoes. There is one month of continuous daylight. In the nine months or so of winter, the average temperature is around -30°F . and there is a month during which the sun never rises above the horizon. Snow covers the land and snow covers the thick hummocky ice of the sea, so that land and sea are almost indistinguishable.

The land, though, is less hospitable than the sea. The weak summer sun thaws only the top few inches of soil, while the ground below remains permanently frozen. Nothing, therefore, can take deep root, and there are no trees, no shrubs, and no vegetable food except occasional moss. All of this means that there is also a scarcity of land animals. Thus the Copper Eskimos, even more than the other coast dwellers we have so far met, were thrown back on the resources of the sea for their living. Since sea and land were equally bleak and icy in winter, they commonly made their winter homes on the frozen sea.

Eskimos of Melville Peninsula build an igloo out of curved snow bricks. This drawing was made on Parry's 1819 expedition in search of the Northwest Passage.

Igloos are often compound structures. Here two dwelling huts are combined with a communal dance house. Access is via the long passageway with its T-shaped entrance.



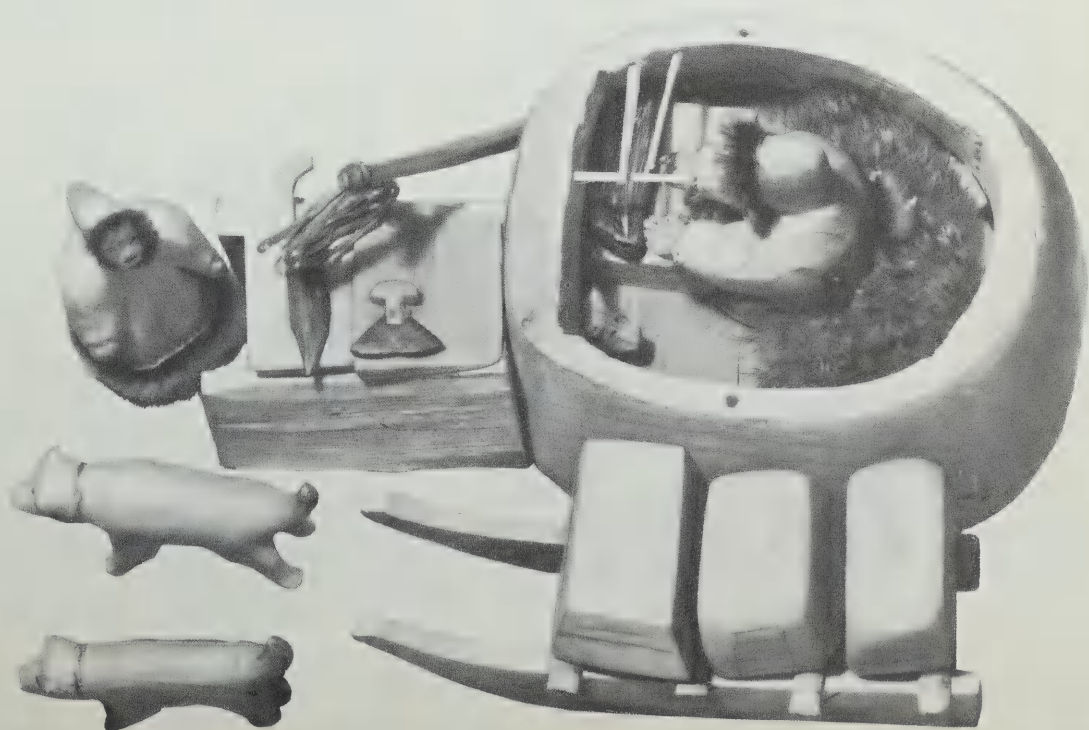
Winter on the Sea Ice

At the beginning of the great annual freeze, each family settled down in a snow dwelling built to last for the entire winter. To live for months on end in a house made of snow sounds appallingly uncomfortable. In fact, the igloo was an extremely successful shelter. It was built from blocks of finely compacted snow that were easily cut from a snow-drift with a bone or ivory knife. There was a good deal of air trapped in such snow, and air that is held in millions of tiny pockets makes an excellent insulator against loss of heat. The igloo-builders began by laying a circle of snow blocks about twelve feet in diameter at ice level. On top of this, more and more blocks were laid spirally and sloping inward, so that the final shape of the igloo was hemispherical. Each block was skillfully cut to fit in its place with the correct slope, and the final key block at the top of the dome was lowered into position from outside. Any cracks or crevices were packed with snow, and a window of ice or gut-skin was let in above the entrance. The entrance was a low tunnel, with a sharp bend in it to reduce drafts, through which the inhabitants had to crawl.

This method of housebuilding, although it called for skill and practice, was simple and flexible. Extensions could easily be made for storage. Sometimes the Eskimos made a group of interconnecting igloos so that several families could enjoy a social life without venturing forth in the worst of the winter weather. The most luxurious igloos had an



An Eskimo woman sitting on an ice bench beside her cooking area. Her utensils include soapstone cooking pots, shallow soapstone dishes on which blubber is burned, racks of gut and sinew, and a woman's curved-bladed metal knife. The model igloo (below) was made in 1961 by a Copper Eskimo. It shows a scene from everyday life and displays both the man's and woman's knives.





inner canopy of skins supported by sinew cords passed through the roof. This left a considerable air space between roof and canopy. Even with a ventilation hole in the top, it was easy to maintain a temperature of up to 50°F. inside such an igloo without melting the roof. Indeed, the igloo was often warm enough to tempt its inhabitants to slip off their heavy outdoor clothing and sit around wearing only their loincloths and fur boots.

The basic furniture was simple in the extreme. It consisted of little more than a low snow-block bench, insulated with a covering of moss and skins. This bench ran right around the wall to form the seating and sleeping accommodation. In the center of the dwelling, to provide light and warmth, there was a stone dish filled with seal blubber—or occasionally whale blubber—with a long strip of moss burning in it. (Seal blubber had the advantage of producing less smoke, but whale blubber could not be wasted when it was available.) The lamp that served as a cooking stove was similar but bigger. Meat was boiled in a deep rectangular soapstone “kettle” hung above it from a tripod.

Although their territory was treeless, the Copper Eskimos were not entirely without wood. During the summer months the rivers brought down driftwood from trees that grew along the banks of their headwaters, far to the south. In fact, the Eskimos could probably have collected enough wood in summer to serve as fuel for the winter. But it seems that they preferred seal blubber, which was a more compact and less

Eskimo sledges (above) are simple and sturdy, and are made of wood or whales' bones. When in motion, the driver has to be on the lookout to ensure that the leads do not get tangled, as for example when two dogs start a fight.

The Copper Eskimo fish spear is a complex weapon. The basic structure is of wood, with two small barbs of copper and a central barb of antler.





Harpooning the walrus was a dangerous occupation. When one was struck and the harpoon head embedded in its flesh, the hunter needed all his strength to prevent its escape. He thus tied the line around his waist.

This hunter has discovered a small mound in the ice. This indicates that a seal has made a hole to which it may later come to breathe.



smoky fuel, and one that could safely be burned in very simple lamps. Wood was reserved for building sledges and summer shelters and for making the handles of tools and weapons.

When the igloo was built and the family comfortably installed, the work of winter hunting began in earnest. The chief quarry was the seal, which provided not only food and skins but also fuel. Hunting it demanded the combined efforts of the Eskimo and his sledge dogs, or "huskies." The man was equipped with a wooden harpoon fitted with a detachable barbed head of bone or ivory, with a line of sealskin or sinew attached to it. The dogs took with them what was equally essential to success—a keen sense of smell.

As the ice forms in early winter, seals scratch breathing holes, or blowholes, in it. As the ice thickens, they keep these holes open. A covering of snow usually makes the blowholes invisible, but dogs can smell them out. So when the Eskimo hunter set out, his dogs guided him to the holes. Then he scraped away the snow to see if the holes were still in use. If a hole were in use it would be covered, at most, by only a thin film of ice. If not, the ice would have had time to thicken. When the hunter came to a hole that was still being used, he replaced the snow over it and stuck in a pointer of bone that the seal would have to dislodge when it came up to breathe. Then he sat down, often behind a temporary snow shelter, and waited, keeping his harpoon in constant

readiness. Waiting was probably the hardest part of the job, because a seal often uses several breathing holes in rotation. This is doubtless why the Eskimo name for this type of hunting is *maupok*, meaning "he waits." But eventually the bone pointer in the blowhole would suddenly move, and the wait would be over. The hunter leaped up, stabbed his harpoon down into the blowhole, and, using the line attached to it, began to play the seal like a fish. At the same time, he hacked away at the rim of the hole to enlarge it, so that when the seal was exhausted he could haul it out onto the ice.

There were many fish to be taken from beneath the sea ice. Holes were made in the ice, and the fish caught with lines fitted with little bone or copper hooks. Some of the meat and fish obtained during winter had to be preserved for use in spring, when the breakup of the sea ice made hunting and fishing difficult for a while. However, food storage presented no great problem in the Arctic. Meat and fish were simply dried and buried in the snow until needed.

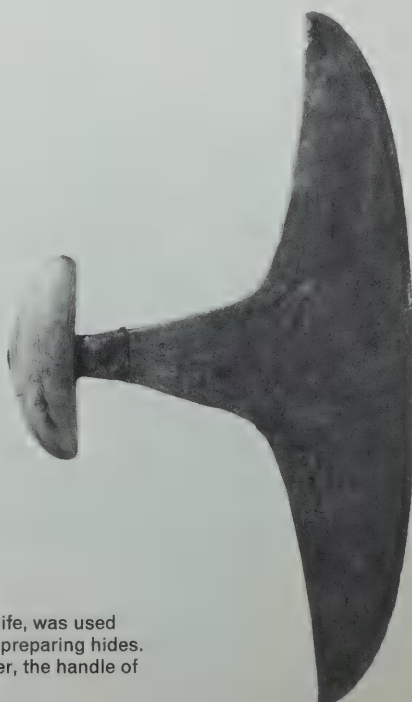
For travel and transport across the sea ice, the Eskimo used a sledge made from driftwood and drawn by a team of up to six huskies. In the absence of nails, the runners and crossbars were drilled with a stone-tipped bow drill, and lashed with hide thongs. The guiding handles were sometimes made of caribou antlers.

While the men were out hunting, the women were busy tending the small children, cooking, and making clothes. Although they used sealskin for clothes, they preferred the skins of caribou, caught during the previous summer, since these were softer and lighter. Skins were cured by smoking and were softened by rubbing fat into them. Before cutting and sewing them into garments, the women made the skins pliable by chewing the edges to be sewn. So strenuous was this chewing that an old woman's teeth might become worn down to the gums. When that happened, her useful life was over. In times of acute food shortage brought on by bad weather, such women were liable to be abandoned to freeze to death.

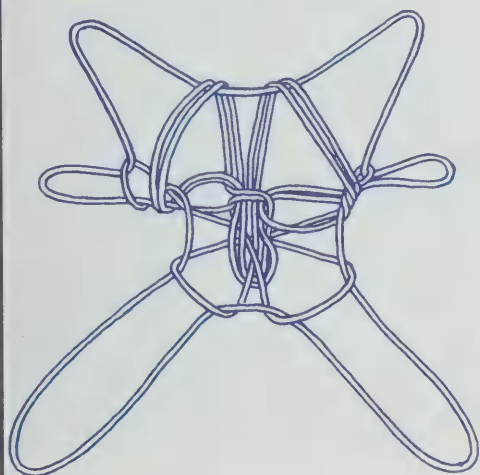
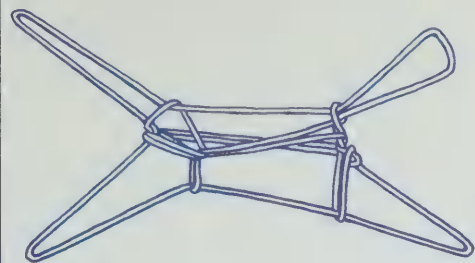
Other indoor pursuits during the winter included fashioning weapons from bone and ivory, shaping stone tools, and making bone toys for the children. Eskimo culture in general was essentially a Stone Age one. But the Copper Eskimos were particularly fortunate in having access to lumps of pure copper, found in the river beds of the mainland. While lacking any method of making a fire hot enough to melt copper, they were expert at beating it out into knives or fishhooks with the help of stone hammers. After



A popular Eskimo game was called *ajegaung*. Two objects were made of ivory. The larger one, representing some kind of animal, was thrown in the air and had to be caught on the pointed one.



The *ulu*, or woman's knife, was used mainly as a scraper for preparing hides. The blade was of copper, the handle of wood or bone.



String games were played by young and old alike. Indeed, parents taught their children. The Eskimos believed in a "spirit of string games," and forbade playing the game in summer. Top: "Dog"; lower: "Man with arms up."

shaping and sharpening an implement, they knew how to harden the metal by tapping it.

With luck, the hunting would be good and an adequate stock of food built up by the last few weeks of winter. Then, while the sea ice was still solid and unbroken, the Eskimos had the ideal time and opportunity for looking up relatives and old friends who lived at a distance. When relatives met, perhaps for the first time in six months, there would be a great pressing together of noses in greeting, days of family gossip, and an exchange of presents. Then it was time for each family to hurry back to its own igloo, for in a little while the ice would begin to break up.

Soon the day came when the igloo began to melt from the outside and the first puddles of water formed on the sea ice. That day, the sledges were packed. Early next morning the family, with all its possessions, would be on its way to the shore where the very different life of the short summer season would begin. The journey might take as much as two days, and before they hurried onto the sloping ice beach the first few cracks would already have appeared in the ice behind them.

Summer on the Shore

Once on shore, the family pushed inland a little way until they found a ridge of snow-covered stones. There they could build a temporary igloo for their immediate shelter. Close beside it the father of the family dug away the snow and scraped a shallow circle in the stones. Then he erected a cone

This is how an Eskimo carries his kayak down to the water. He is here seen wearing a jacket made of birdskins. In his right hand he holds a double paddle.





of wooden poles that he and his wife covered over with skins from the pile carried on the sledge. Half a dozen other families would be busy erecting similar summer dwellings nearby, and in a day or two there would be a complete Eskimo village of perhaps fifty people.

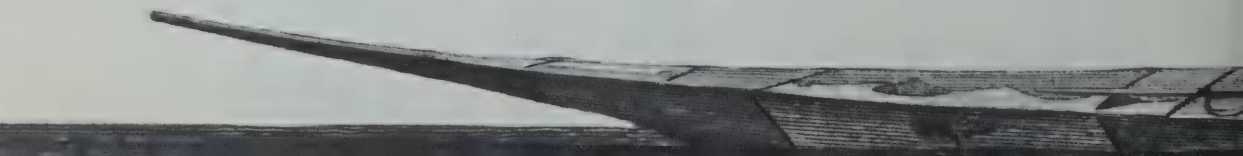
For a time, before the sea ice had broken up much and while the land was still covered in snow, people had to rely mainly on the caches of meat and fish that they had made during the winter. But already the men would bring in an occasional hare or a bird that they had brought down with a small bird bolas. Later, as the waters of rivers and sea opened up more and more, summer hunting moved into full swing.

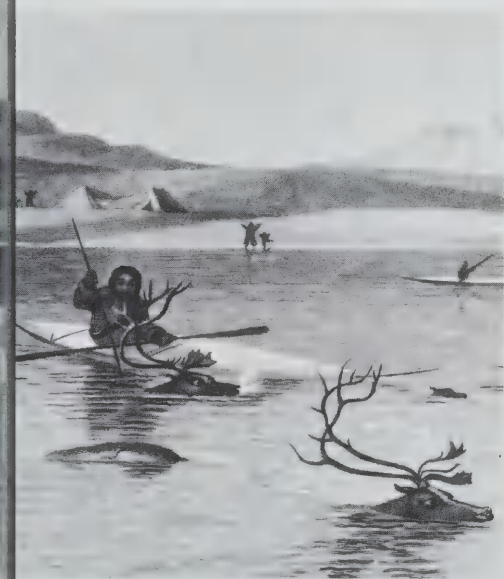
Sledges were still used for transport over the smooth mossy tundra, but now was the time when boats came into their own. The most important was the *kayak*, a one-man canoe about twelve feet long made of sealskins stretched over a framework of driftwood, and fitted with straps and clips to hold spears and harpoons in position. It was entirely decked over with skin except for a circular hole just big enough for a man to slip himself in, and it was propelled with a double paddle.

It was in his kayak, and garbed in a waterproof suit made

The Eskimos used to hunt whales, and whale-hunting features in their mythology. A small flotilla of kayaks set out and, when a whale was located, the men harpooned it again and again. Attached to each barbed harpoon head was a line leading to one or two inflated seal-bladder floats. These served to exhaust the whale by impeding its swimming and diving.

Parry's expedition witnessed the end of a successful caribou hunt (right). A small herd had been driven into the sea, to be killed by the huntsmen. Below: An Eskimo in his kayak wearing slitted snow-goggles made of ivory.

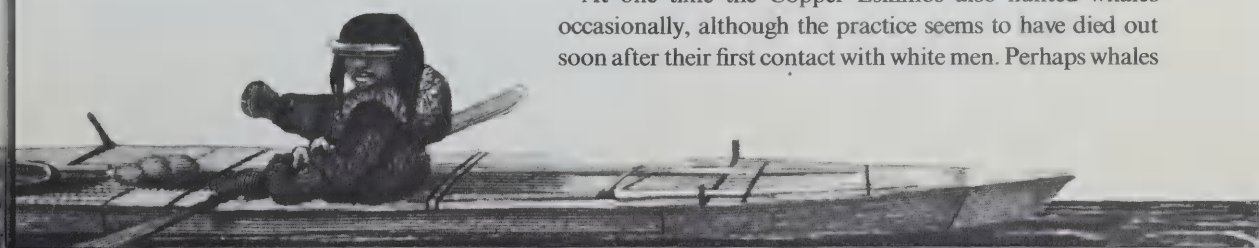




from the gut-skin of seals, that the Eskimo chased seals. Occasionally he chased one of his most prized quarries, the walrus, whose tusks provided ivory for making tools and weapons. If the hunter harpooned a large animal like a walrus from his kayak, he could not hold on to the line without the near certainty of being dragged along at a dangerous speed. So, instead, he attached inflated skins to the harpoon line to prevent the wounded animal from diving, and also to serve as markers. These inflated skins, sometimes used in conjunction with hide and wood hoops, slowed down the movements of the animal and helped to bring about his exhaustion.

The kayak was even used in hunting land animals. In summer migrating herds of caribou came into Eskimo country. A favorite method of catching them was to drive them down a valley into a lake or river, or into the sea. There, slowed down by the water, they were attacked by hunters in kayaks who could easily move faster and spear them as they swam. But the Eskimos also hunted land animals with bows and arrows.

At one time the Copper Eskimos also hunted whales occasionally, although the practice seems to have died out soon after their first contact with white men. Perhaps whales



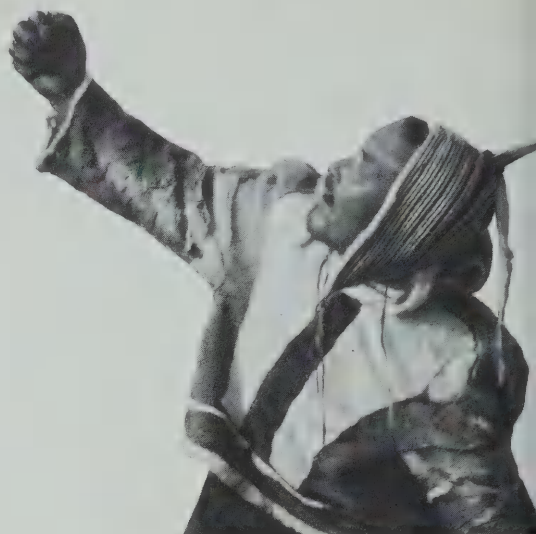


were by then already becoming uncommon in Arctic waters. When they saw the whales spouting offshore, six or seven hunters in their kayaks made off at top speed and tried to isolate one young whale from its companions. If they succeeded, two or three harpoons fitted with inflated skin floats were driven into the animal. The whale would dive deep, churning up the water and setting the kayaks bobbing wildly. But soon it would surface again, and the telltale floats set the hunters on its track once more. In time, the whale was so exhausted by the chase that the hunters could kill it with their spears. Meanwhile two big *umiaks*—open skin-boats each carrying eight women—had followed behind the hunters. Their crews were now ready to help attach long ropes of sealskin to the dead whale and tow it ashore.

Eskimo Society

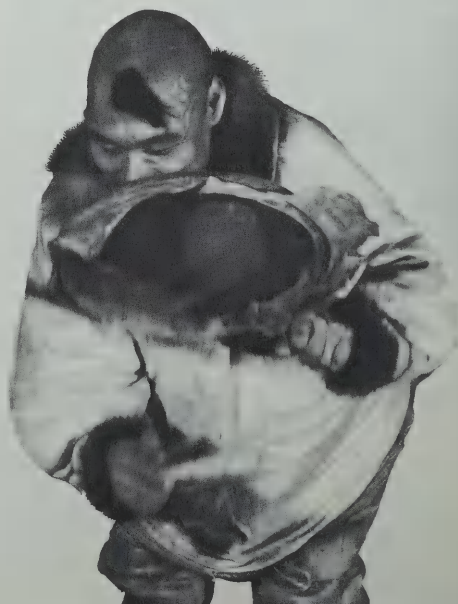
Eskimo social organization was uncomplicated. There was no formal chain of authority, and the nearest approach to a chieftan was the leader of a camp or settlement. His position did not depend on birth or election, but simply on the fact that he was generally regarded as the most skillful and reliable hunter. He was a man, too, who in times of difficulty would be able to support other people. Discipline within the community was not normally his business. For example, one man might murder another in order to steal his wife. But that was a private affair and not one on which either the leader or the community as a whole would take any action. The only risk the murderer ran was that of reprisals by his stepsons when they grew up. Theft, too, was a matter only for private reprisal. But if a man became a nuisance to the whole community, endangering its safety or jeopardizing its success in hunting, other men might get together and either kill him or banish him from the group.

In all things, the community and its welfare were valued above the rights of individual members. Life was precarious. In times of food shortage the aged and sick, who could contribute little in return for their keep, might be abandoned and left to starve or freeze to death. Again, if a family were already so big as to strain the food-getting efforts of the adult members, unwanted children might be killed at birth. Yet the ruthlessness of the Eskimo should not be mistaken



A Copper Eskimo dancer wearing a special loose hood surmounted by a bird's bill. Dancing took place on ceremonial occasions, to honor the spirits of the animals on which the lives of the Eskimos depended.

Below: A skin stretched over a circular wooden frame forms a short-handled drum. It is beaten to give ■ basic rhythm for dances.





The carvings on a walrus tusk (above) portray scenes from Eskimo mythology. The creatures under the inverted-bowl shapes are "earth spirits." Also shown are caribou spirits and two dancing caribou.

Below: Eskimo children at play in the Canadian Arctic today. They live in bigger communities than earlier generations did, and their health and schooling are cared for by the Canadian Government.



for cruelty. It was equally true that the unwanted children of one family would be adopted and brought up by another family that was better able to support them.

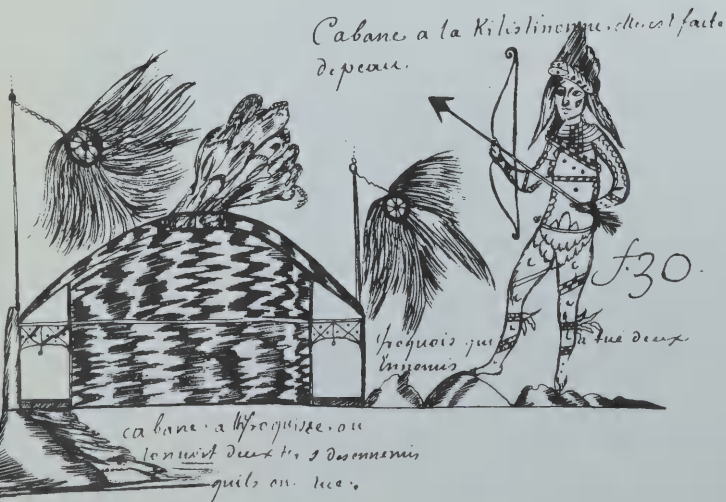
Religion and folklore were simple, with only a vague mythology. One of the principal figures was Sedna, a feminine deity, who lived at the bottom of the sea and from whose chopped-off fingers the seal and the walrus were created. Each camp group usually had a shaman, or priest, who was consulted before the major seasonal moves were made. But most decisions of importance rested with the men most experienced in hunting. The incantations of the shaman were probably regarded mainly as an insurance against the possible ill-will of spirits.

Today the pattern of Eskimo life is drastically altered. The change began when fur traders first penetrated to the extreme north of Canada and provided the Eskimos with an incentive to trap foxes and exchange their furs for guns and metal tools. Along with the benefits of commerce with the white man, however, there came diseases—especially tuberculosis—to which the Eskimos were not immune, and which for a time caused a decline in population.

In recent years the Canadian Government has assumed responsibility for Eskimo welfare. Schools, hospitals, and churches have been provided, and there is a system of social security that ensures that no Eskimo need starve. In some areas there have been far-reaching changes in the old Eskimo way of life. Owing to increasing scarcity, whaling has declined, and wild caribou are no longer plentiful. So tame reindeer have been introduced, and many of the hunters have become herdsmen. In other areas, such as Cambridge Bay on the south shore of Victoria Island, there are Eskimos living a life of comparative ease in centrally heated buildings provided by the government. But in general the Eskimos are not idle, even though they prefer the comforts of civilization to the hand-to-mouth existence that was formerly theirs. The younger men take jobs for regular wages, which they can convert into food and other goods at the local store. In particular, they make good mechanics, as is to be expected of a people who have long depended on manual dexterity for a living. They remain essentially the practical people they always have been.



In 1632 Samuel de Champlain, the French explorer, published this Iroquois hunting scene: The game was driven into a narrow-ended stockade where it could be killed. Baited spring traps (right) were also used.



An Iroquois brave standing outside his hut is shown in this drawing by de Granville, around 1700. Two scalps of slain enemies decorate the house posts. A hole in the roof lets out smoke from the cooking fire.

6 LIFE IN THE OPEN WOODLANDS

Iroquois of New York State

The temperate zone has proved to be the most favorable region for human settlement. Here the summers are warm and the winters cold but not too severely so. The rainfall is moderate and distributed fairly evenly throughout the year. Often, before human occupation, the land is covered by mixed deciduous forest. But where man has settled and made clearings, a patchwork of woodlands and rich grassy plains is the result. The woodland areas are usually well stocked with game animals. The grasslands are fertile and eminently suitable for agriculture. It is easy to understand why in both Europe and North America these regions have become the cradles of past and present civilizations.

One such region in North America includes what is now part of the state of New York. There, some four hundred years ago, a group of five Indian tribes numbering between fifteen thousand and twenty-five thousand people formed a confederacy that was to reach the highest degree of social organization of any Indian community north of Mexico. This confederacy, called the Iroquois League, or the Five Nations, consisted of the Seneca, Cayuga, Onondaga, Oneida, and Mohawk tribes. Their territories were adjacent to each other, and extended from the northeast shore of Lake Erie in the west to the Hudson River and Lake Champlain in the east.

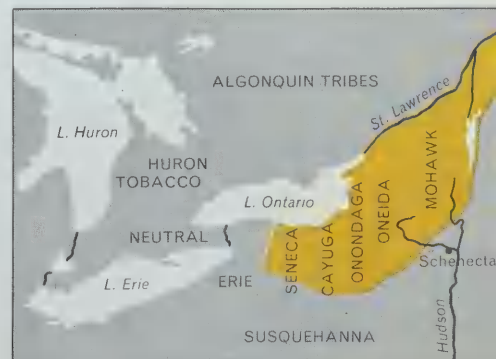
Aims and Organization of the Iroquois League

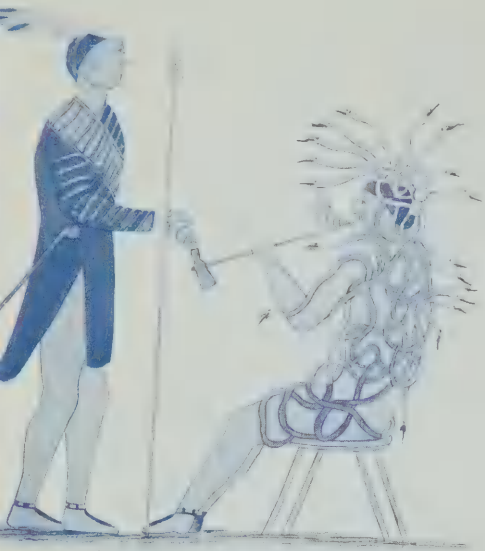
According to Iroquois tradition the League was founded, probably in the 1570s, by Hiawatha (whose name Longfellow later misused for a legendary Cree hero) and a great chief named Dekanawida. Their aims were twofold. First, they wanted to end the bloody skirmishes that had formerly



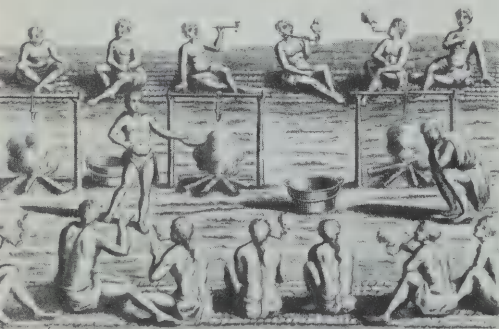
An Iroquois warrior, with his clan symbol, the tortoise, behind him. This portrait was painted by John Verelst.

Map showing the areas occupied by the five nations of the Iroquois confederacy and their neighbors.





A painting by Eastman (above), after an Indian original, commemorates the founding of the confederacy. A Mohawk chief (left) wearing a British topcoat has come to meet Atotarho, an Onondaga famous as both a warrior and a sorcerer. The Mohawk is asking him to join the Great Peace.



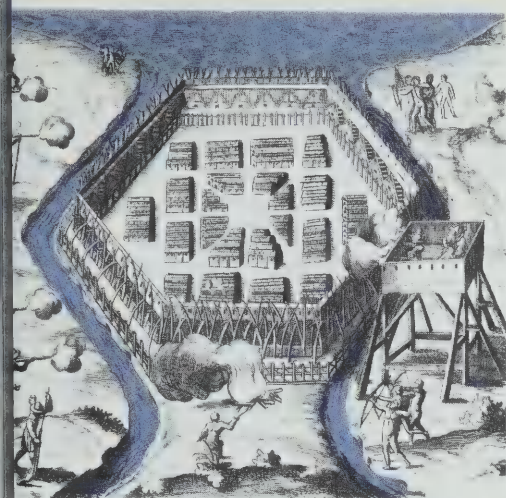
Feasting and dancing (above) were recurrent activities in Iroquois villages. Every guest was obliged to eat an enormous quantity of food, and failure to do so was punished.

gone on among the five tribes and to weld them together for defense. They also wanted to pacify neighboring tribes—if necessary, by means of conquest. The first aim was ambitious enough, because each of the five tribes placed a high value on its own independence and freedom of action. The second was even more ambitious, because the Iroquois were surrounded by powerful neighbors. These included the Huron, the Tobacco, and the Neutral to the west; the Erie and the Susquehanna to the southwest and south; and Algonquin tribes to the north and east. Of these many neighbors, the Huron by themselves probably outnumbered the Iroquois.

Clearly the Iroquois League needed to organize itself in a way that would give all its member tribes a strong sense of common purpose without robbing any of them of their individual freedom. The solution turned out to be a form of representative federal government. The governing body, or Great Council, consisted of fifty *sachems* (senators) who represented each of the clans of the Five Nations. These sachems, who usually came from the most influential family in each clan, were appointed by the head clanswomen. Inheritance and a great deal of authority among the Iroquois passed through the female line. The appointment was normally for life, but a head clanswoman could replace a sachem who proved unsatisfactory. There was also a secondary order of sachems—called Lone Pine Chiefs—whose appointment was based on merit rather than birth and who could speak but not vote in council.

The Great Council met each summer near the northern shore of Lake Onondaga, for the tribal lands of the Onondaga were at the center of the Five Nations territory. The Onondaga also traditionally provided the chairman of the council. At these meetings no individual sachem or tribal faction could force opinions on other members of the council. All decisions had to be the result of unanimous agreement achieved through discussion and persuasion.

When a decision had been made it was recorded by the Keeper of the Wampum. Acting as secretary to the council he threaded a particular combination of shell beads onto a string, kneeband, or belt according to the importance and complexity of the decision he was recording. Each pattern of white and purple beads had a particular meaning that the Keeper knew by heart. At the end of the summer council meeting, there was a great public gathering at which the Keeper would consult his wampum records and tell the assembled people about new council decisions, intertribal treaties, and victories over enemies of the League. The



Above: Hurons and French attacking a palisaded village of the Onondaga tribe. Its defenses, proof against bow and arrow, are of little use against the Europeans shooting down from their tower (right).

Jesse Cornplanter, a Seneca youth, drew this scene of everyday life around an Iroquois bark house.

gathering would conclude with four days of prayer, feasting, and dancing by men. Women took no active part in the ceremonies.

Life in a Mohawk Township

The five tribes of the Iroquois League were divided into clans, each of which had its own township. In the central area of the League's territory, south of Lake Ontario, conditions were comparatively peaceful. There the towns usually consisted of small separate houses surrounded by a simple palisade. Border towns, where fierce fighting was common, were heavily fortified. A typical example was the Mohawk town of Schenectady, which was set in woodlands overlooking the Mohawk River some twenty miles from its junction with the Hudson. The town was surrounded by three rings of deep trenches, each lined with a palisade of huge, pointed stakes. A narrow causeway led across these trenches to a gateway through an inner wall of tree trunks. The little town within consisted of three immense wood-bark houses, each about three hundred feet long, twelve feet wide, and twenty feet high, with an arched roof. The houses had fifteen rooms, each occupied by two families—one on either side of a central fireplace. Beside the fire were large, flat stones on which stood tall clay pots used for cooking the Mohawks' customary meal of stew. The walls of the rooms were festooned with skin bags and gourds used for storing

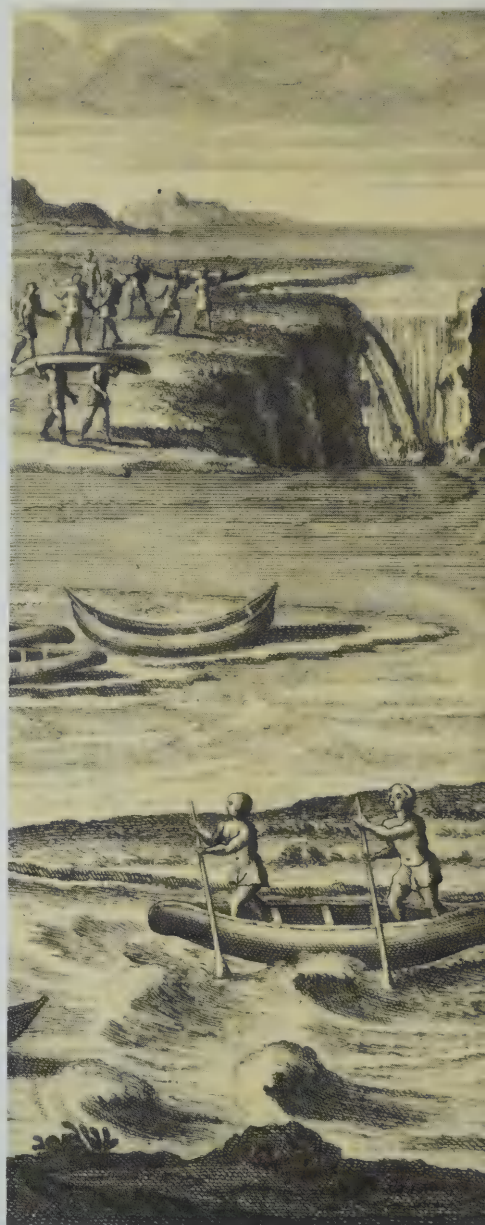


food and water. Elsewhere on the walls hung articles of clothing such as skirts and long overskirts, together with weapons and large bunches of corn ears.

Surrounding the cleared space around the town was a mixed forest of oak, maple, birch, beech, and pine trees. Trails led through the forest to many large clearings where the people of the town grew much of their food. Each family had its own plot where they cultivated four kinds of corn, together with beans, various squashes, hard-skinned gourds, and tobacco. Farm work—breaking the ground, making the furrows, planting, and harvesting—was done by the women, in whose name ownership of the land passed from generation to generation. But the plantations in the forest clearings were not the only source of food for the Mohawks. Fruit and berries grew in abundance on the heathland near the woods. The sugar maple trees could be tapped in the spring. Hives of wild bees produced honey in great quantity. Rivers and lakes provided plenty of fish. The forest abounded with deer and smaller animals that filled the stewpots of every Mohawk family.

For the Mohawks, as for other Iroquois tribes, rivers were the main highways, and canoes the main means of transport. Most Iroquois canoes were cumbersome affairs made of elm bark. Sometimes, however, the Mohawks and other Iroquois purchased delicate, white birchbark canoes made by tribes farther north. In these, the bark was lined on the inside with slats of wood lashed to slender spruce frames. Although light and seemingly frail, these canoes would bounce off rocks without damage as the tribesmen sped over rapids.

In times of peace the Mohawks sometimes went on trading expeditions in their canoes to the mouth of the Hudson River. This was a journey of more than one hundred and fifty miles, and needed careful preparation. Before setting off, the trading party sealed every joint in the birchbark of the canoes with pitch that had been roasted out of pine trees. Then the goods they intended to trade were packed in birchbark boxes, covered with well-greased skin bags for extra protection. The Mohawks offered a variety of wares—prepared deerskins, leather belts and moccasins embroidered with porcupine quills, foodstuffs such as berry pemmican, and beautifully finished wampum beads. In return they accepted finely carved wooden bowls and ladles from the Mahicans of the lower Hudson valley. Or they obtained small shells, which were the raw material for making wampum, from the Delaware people of Long Island.



Bark canoes provided the Iroquois with their chief means of transport. They were light and tough, and each had a two-man crew, as portrayed by the missionary Lafitau in 1724.

Making wampum was a delicate operation that called for considerable skill. The Mohawks used only the thick hinge sections of the shells, which they ground into regular cylindrical shapes between grooved stones. Then the inside of each cylinder was bored out with a wooden needle dipped in sand and rotated between the palms of the hand. The wampum beads were then polished on a smooth stone and strung on lengths of fiber.

Wampum had two main uses. First, it was used as the Keeper of the Wampum used it—as a “memory-jogger” for recording or passing on information. Second, it served as a general medium of exchange, as money does in the modern world. It was, indeed, the standard form of currency throughout the territories of the Five Nations. This currency was divided into standard “denominations” based on the number of beads on a fiber string. The three basic units were a hand length, an arm length, and a fathom (the distance between the fingertips of a man’s outstretched arms). In addition, beads were of two colors, white and purple, the white being five times as valuable as the purple. (Exchange rates for wampum and coins were established between Indians and early European traders, and the beads retained their value until the mid-eighteenth century, when they were counterfeited on a large scale with the use of glass.)

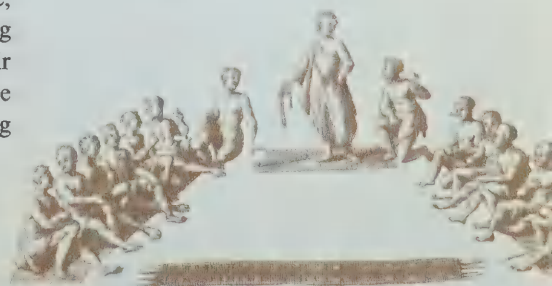
Changing Seasons, Changing Work

As is the case with all farming peoples in temperate lands, the life of the Iroquois was regulated by the seasons. During the early spring the people were busy clearing the ground and digging the soil. First the earth was turned with digging sticks. Then the women broke up the clods with short-handled hoes made from the shoulder blades of deer. The planting of corn and tobacco that followed was a sacred activity, accompanied by prayers to the gods. Each ear of corn was thought to contain something of the spirit that gave life to the people. Tobacco, regarded as a magic herb that enabled some people to see visions, was never smoked simply for pleasure. It was always used as an invocation to the gods for help along the path of life.

In the summer the women and children spent most of their time in the plantations, protecting the crops from birds and mice. The men hunted or, in times of intertribal strife, planned and executed raids on other tribes. When the young corn ears were big enough to be eaten, the people held their five-day Green Corn Festival, the greatest ceremony of the year. It was a time of rejoicing, for the abundance of young



Above: A belt of wampum. Below: The council of Iroquois leaders assembled each year to recite the laws of the confederacy. In the foreground the artist has drawn an enlarged view of the wampum belt.





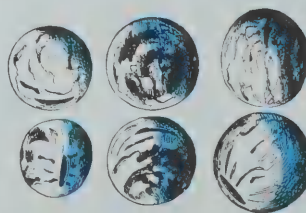
corn foretold that their food supply was assured for another season.

With the coming of autumn, the last of the corn was gathered in, the beans and squash harvested, and the work of preserving food for winter and spring begun. Much of the corn was roasted, packed in huge baskets or bundles of matting, and then buried in dry storage pits. The meat of game animals was smoke-dried and hung indoors. Some animals were killed for their kidney fat, which was melted down and mixed with berries to make a nourishing pemmican that would remain fresh for years.

During summer and autumn there was ample time to relax, and the men frequently devoted themselves to sport. They spent hours training for foot races and wrestling matches and, like many other North American Indians, they were skilled archers and javelin throwers. The great national game of the Iroquois was a kind of giant lacrosse, played with a ball of deerskin and clubs of hickory fitted with bast-fiber nets. The goals were often one hundred yards or more apart, and each team might consist of over one hundred men. It was normal for a match to take a heavy toll in broken bones and torn ligaments. A far less strenuous but equally popular game was played with fruit stones painted black on one side and white on the other. Several of the stones would be cast into the air, and each player would bet on the number of sides landing with one or other color turned upward.

Artist's reconstruction of how an Iroquois ball game may have looked. It was a rough affair, in which every able-bodied man took part, and injuries were common.

A popular game among the Iroquois was a form of dice-throwing. A number of fruit stones—black one side, white the other—were thrown into the air, to see how many would land the same way up.



Winter brought thick falls of snow that might carpet the land for three months or more. This was the time to catch up on the work that could best be done indoors, especially making and embroidering clothes. It was also the time to gather around the fire in the evenings and listen to the tales the old tribesmen would tell about gods and spirits and long-ago battles. But there was work to be done outdoors as well. The men would sometimes don their snowshoes and go off hunting. The women went into the woods and collected firewood, bringing it home on tobaggans or on stick travoies drawn by dogs. For children the favorite outdoor pursuits were tobaggan races and “snow-snake” competitions. The “snow-snake” was a specially smoothed stick, and the winner of the competition was the one who could send it whizzing farthest along the surface of the snow.

Gods, Dreams, and Demons

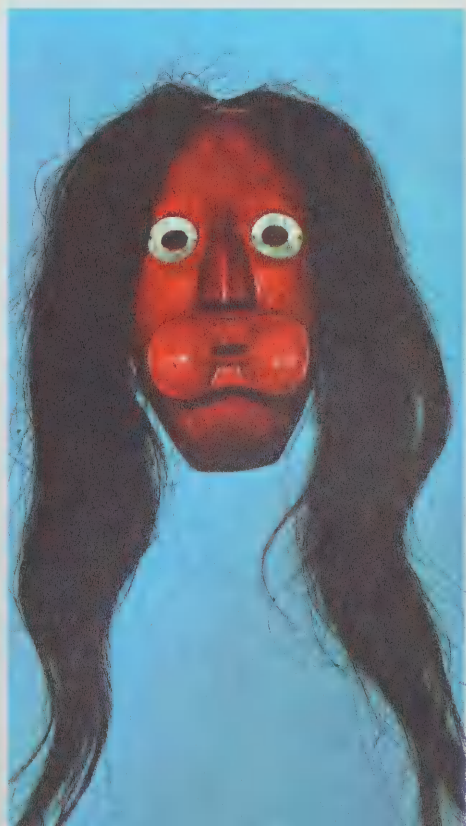
Religion was an integral part of the life of the Iroquois. Their greatest god was called the Master of Life, and he was believed to be engaged in a constant battle with his brother, the God of Evil. When a man died, his soul left for the afterlife, but no one doubted that his ghost remained on earth and continued to play a very real part in the life of the tribe.

The Iroquois believed strongly in the power and significance of dreams. If a warrior dreamed that he had been captured and tortured, on waking he would ask his fellow tribesmen to torture him. If they agreed—as they probably did—his dream would be fulfilled and he would not have to live in dread of imminent capture by enemies. Tribal chiefs were unwilling to challenge fate by denying a man fulfillment of his dreams. Sometimes they even allowed murder to go unpunished if it had been foreseen in a dream. Even wars were often planned as a result of someone having dreamed of a successful raid against a neighboring tribe.

Dreams were not only regarded as sure guides to future events. They were also the means by which the Iroquois acquired *orenda*, the mystic, impersonal power that gave men control over sickness and other adversity. Those whose minds and bodies were imbued with *orenda* were relied upon to vanquish the spells of the Rolling Heads—evil disembodied heads that were believed to haunt tribespeople and make them sick or mad. In order to cure the afflicted, members of the False Face Society donned wooden masks carved to represent their patron spirits. Then they performed complex rituals to drive these demons away and break their spells.



Members of the False Face Society wore masks, of hideously distorted faces, to drive away unwanted spirits troubling the people. Today, Iroquois men continue the tradition in some areas. Above: A member of the society in a field. Below: Another False Face.



War and the White Man

Among its own member tribes, the Iroquois League was known as *Ongwano Sionni*, meaning "We are of the extended lodge." In other words, "We are all one big family." In fact, the two hundred or so years of its existence were among the bloodiest in Indian history. In the northeast the Iroquois probably caused more blood to flow than any other group of tribes. It is impossible to assign all the blame for this wholesale bloodshed to any one group. Many of the warring tribes and confederacies were traditional enemies. All were concerned with expanding their sphere of influence, obtaining wider trade contacts, and enlarging the area of land available to their peoples. Suspicion, distrust, and outright war between the Indians were, moreover, fanned by the rival French, Dutch, and British settlers. In the seventeenth and eighteenth centuries, all these Europeans were attempting to push the frontiers of their colonies westward from the Atlantic coast.

In a series of campaigns between 1649 and 1680, warriors of the Five Nations, spurred on by their dreams and confident in the united power of the League, gradually crushed all their Indian rivals. The Iroquois were armed not with the traditional bow and stone-pointed arrow, but with muskets obtained from Europeans. They defeated in turn the Huron, Tobacco, Neutral, Erie, and Susquehanna peoples. By the beginning of the eighteenth century they controlled most of what are now the states of New York, Pennsylvania, and Ohio. Thus they straddled the only routes into the interior that the Europeans knew of. By that time the Dutch no longer had any force in North America. For the first half of the eighteenth century the Iroquois adopted a cunningly neutral attitude toward the French and British, playing one off against the other. Generally, however, the balance of the Iroquois' favor tipped toward the British. This was mainly because, during the tribal wars, the French had helped the Huron against the League. Indeed, it has been said that, but for the Iroquois, North America might have become French.

But the involvement of the Iroquois with Europeans eventually led to the breakdown of the League. During the American Revolution of 1776 the Iroquois (*Six Nations* since 1716, when the Tuscarora, who had migrated northward from North Carolina, joined the League) became divided in their loyalties. The Mohawk, Onondaga, Cayuga, and Seneca entered the war on the British side. The Oneida





In 1710 the balance of power between Britain and France in North America was held by the Iroquois. In order to win them over, the British escorted several chiefs to London to see Queen Anne. While in England, they were painted by John Verelst, who portrayed them with their animal clan symbols.



and Tuscarora fought with the American colonists. With its constituent nations fighting one another, the days of the League were numbered. At the end of the war, the Oneida and Tuscarora, having supported the victorious colonists, were allowed to remain on their tribal lands. The four Nations that had supported the British were moved to tribal reservations on the banks of the Grand River, Ontario, where it was hoped they would settle as farmers. Today, the remnants of the Six Nations are scattered far and wide.

Even at the height of their power in the early eighteenth century the Iroquois were primitive compared with European urban peoples of the time. Yet they had some of the cultural features that develop on the threshold of civilized life. Although they had no script and could not read, they used their wampum beads to record and pass on information from one generation to the next. And although they had no coinage, they used wampum as a common currency throughout the League, and even beyond its borders.

Most important, the League instituted a system of representative federal government. It was strong enough to hold all its member nations together for a common purpose, and yet it left them with complete control over their own internal affairs. Many people believe that these features of the League influenced the minds of those who drafted the constitution of the United States. Certainly the relationship between modern American federal and state powers and responsibilities in many ways echoes that between the League and its member nations.



Once the Iroquois were dreaded fighters. The engraving of 1687 (above) shows a party of French militia being ambushed. Nowadays their fearless spirit leads them to take dangerous construction jobs, specializing in work at great heights (left).



Nyimi Lugengo, the present-day king of the Bushongo, is seen here with an attendant. His feet must not touch the ground, and so a mat is spread for his throne to rest on.



The homeland of the Bushongo is at the southern edge of the great Congo rain forest. The land there is open and suitable for agriculture.

Bushongo of the Congo

The Congo River and one of its great tributaries, the north-westward-flowing Kasai, merge some three hundred and fifty miles before the Congo flows into the Atlantic. The Kasai, in turn, is fed from the east by another major river, the Sankuru. It was near the confluence of these two rivers, in the heart of what is now the Congo Republic, that there arose the kingdom of the Bushongo peoples. It was a kingdom made up of several agriculturalist tribes, and it took its name from the *shongo*. This was a dangerous throwing knife with several short-pointed blades set at right angles to the handle, which these tribesmen once used in warfare.

Little is known about the history of the Bushongo for two reasons. First, they had no script and therefore could not keep written records. And second, it was not until late in the nineteenth century that Europeans began to explore their country and study them at first hand. (Portuguese explorers found the mouth of the Congo almost five hundred years ago, and for the next three centuries Portuguese and other European adventurers were frequent visitors to the West African coast. But their main interest in the native people was to take them as slaves to be used in the colonies of the New World.) However, research into tribal movements in this part of the continent, together with the evidence of Bushongo folklore, gives us some clue about the origins of the ruling tribe of the Bushongo—a tribe called the Bambala. Bambala traditions assert that they migrated many centuries ago from a far northern country where there were less forest trees and a great lake. This may have been somewhere in the region of Lake Chad. Further evidence of their northern origin is provided by the shongo knife, a weapon that has its home among the peoples of the Ubangi-Chad region.

It is believed that for some undiscovered reason the Bambala began a southward migration some time between the sixth and eighth centuries A.D. As an agricultural people, they disliked and feared the great Congo rain forest. Yet they forced their way through it yard by yard until, to the south of the Sankuru River, the forest gradually gave way to

gently undulating grass- and scrubland dotted with clumps of trees. Here, in a land of hot wet summers and hot dry winters, was an ideal place for them to settle down again and raise food crops.

King Shamba's Rule

By the early years of the seventeenth century the Bambala had begun to build up a civilization of their own. Their king at this time was Shamba Bolongongo, who was to become the greatest of Bambala heroes and the leading figure in welding together the Bushongo nation. It may well be that some of the stories that have grown up about him are legendary. But it is evident that much that was best and most enduring in the nation's culture stemmed from his period of rule. Before succeeding to the throne he is said to have traveled widely in lands to the west of his own country, so that when he became king he was able to introduce many innovations. He taught his subjects how to weave raffia fiber into garments. He planted cassava, a starchy edible root that, unlike the Bambala's staple millet, could not be attacked by locust swarms. And he encouraged metalworking, wood carving, and embroidery.

Above all, he was convinced that his people could not prosper, economically or culturally, unless they made themselves secure against attacks from neighboring tribes. Many of these were engaged in capturing slaves to sell to Portuguese—and later to Arab—slave traders. With this conviction in mind, he succeeded, largely by peaceful means, in closely unifying his own tribe, the Bambala, with several neighboring agriculturalist tribes, notably the Bangongo, Bashui, Bakete, and Bakele. The combined strength of these peoples, who made up the Bushongo nation and whose territories covered about eighty-five hundred square miles, was enough to inflict decisive defeat on any tribe foolish enough to attack them. It was also enough to delay European exploration of the Bushongo country until late in the nineteenth century. By that time, the Bushongo culture was already in decline, but here we shall try to catch a glimpse of it as it was in its heyday.

Government and Capital

Under the rule of an all-powerful *nyimi*, or king, the Bushongo nation was governed by a number of local viceroys. Their job it was to administer the affairs of the various tribes. The viceroys had a large measure of autonomy in the



A Bushongo wood carving of around 1600, depicting the most famous king, Shamba Bolongongo. In front of him is a gaming board, one of the many novelties he introduced to the Bushongo way of life.





The present-day king with some of his numerous children. These royal children are privileged. Lower-class children (below) must assist with chores, and will grow up to tend the fields of millet and cassava.



government of their own regions, and represented their peoples in the Bushongo Great Council, or Parliament, which sat under the nyimi. To the Bushongo people as a whole the nyimi was the honored chief to whom they offered complete political allegiance. To the Bambala, from whose clan every nyimi came, he was much more. He was a direct descendant of their god Bumba, founder of the tribe. The spirit of Bumba infused all things. It caused the sun to shine, the rains to fall, and the seed of all living things to ripen. To the Bambala, the nyimi was the incarnation of this all-pervading spirit, and he held the title *Chembe Kunji*—god on earth. If his honor was questioned, it jeopardized the spiritual integrity of the whole tribe—a thing far more terrible than economic ruin or defeat in war.

The Mushenge, or capital, of the Bushongo nation lay some four hundred miles due east of the present city of Leopoldville. It was a busy little town of some two thousand to three thousand Bambala tribespeople. The houses were simple rectangular huts about six feet high, constructed of woven palm leaves, with pitched roofs of the same material. Each house was set in a small courtyard and was screened from its neighbors and from the street by a palm-leaf wall. The Mushenge had two main streets—long, straight, and about thirty feet wide—and a maze of narrow, winding lanes running off between the houses. The royal residence was in the center of the town, surrounded by a palisade. Within it were storehouses, a jail, and accommodations for the nyimi's wives and personal slaves. The nyimi's house, standing in its own enclosure, consisted of two large rooms, their roofs supported by carved pillars.

The nyimi's political power was reflected in the number and variety of officers and "hangers-on" at his court. Within the council were the chief minister, the viceroys, the minister of war, the keeper of the records (who needed an excellent memory, since the Bushongo had no writing), the representatives of the craftsmen and artists (who were organized in a manner similar to the craft guilds in medieval Europe). There were also thirteen women, including the king's mother and at least one of his wives. In addition, there were heralds, military officers, magistrates, and even a man whose sole official function was to remove obstacles, such as stones and twigs, from the nyimi's path. In all, about one hundred and twenty people had the right to speak in council. Most dignitaries carried a wooden baton of office whose surface was carved in a particular way to distinguish the holder's rank. Instead of a baton, the chief minister had a slave boy upon whom he would lean at council meetings or when



Against the background of the Mushenge's walls stand two elder statesmen, dressed in all the finery of Bushongo warriors. These men form part of the ruling council, representing groups within the nation.

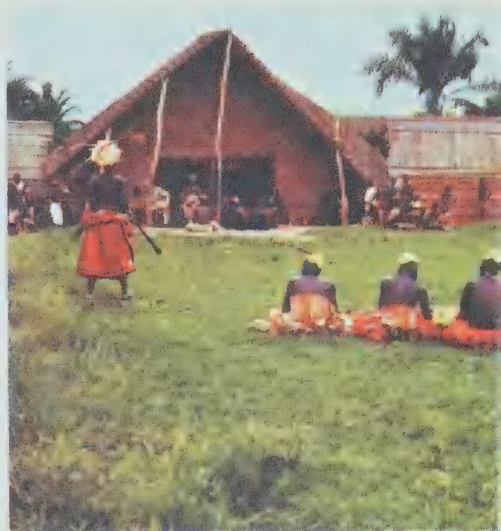
walking about the town. The nyimi, who was considered so sacred that his feet must never touch the ground, had a number of special slaves to carry him about in a basketry litter. When he sat down, a slave would crouch before him to serve as a footrest.

At the outskirts of the Mushenge, the narrow paths wandering away to outlying towns and villages ran through tall yellow grass and scrub. In the distance could be seen the rolling hills, many of them covered with forest. Most of the Bambala's farmland lay several miles from the capital where the fertility of the soil was not exhausted. Only a small proportion of the citizens cultivated the land, since farmers from the neighboring villages supplied the Mushenge with much of its food in exchange for products made by the town's craftsmen. The principal crops grown were millet and cassava. In addition there were groundnuts, yams, a variety of plantains, and also cabbage palms, whose leaves made a nourishing vegetable and whose sap could be brewed into a heady wine.

The cultivable land was divided up into small plots on each of which enough food could be grown to support one family in a normal year. Farming was done mainly by the women, several of whom worked cooperatively from plot to plot. At planting time they worked in long rows, digging shallow trenches with iron-bladed hoes and singing songs to the rhythm of their movements. Many of the married women worked with babies slung across their backs. Older children ran about the plots, driving the birds away and inspecting the woven-cane traps they had set to catch rats and mice.

The main items of Bushongo diet—cassava and millet—were simply boiled in a pot and stirred into a thick porridge. In the mornings it would be eaten cold. In the evenings it would be heated and supplemented by a dish of vegetable stew. On special occasions meat or fish were added. Despite their prowess in warfare, the Bushongo were poor hunters of game animals. But they kept chickens and goats, and in addition they caught many river fishes in large wicker traps. Fruit and groundnuts helped to vary their diet and keep them healthy.

For most citizens of the Mushenge, the good life was fully realized not on the land but in the town. They regarded themselves as the aristocrats of the Bushongo peoples. Many of the minor courtiers and heralds were members of the Bambala royal line. They did not care for farming and preferred the refined atmosphere of life near the seat of power. Moreover the Mushenge—like many a present-day



The tribal council in conference. Dignitaries in their robes of state discuss their problems in a big open area before the royal palace.

A minister addressing the council. Dressed in a finely embroidered robe, he holds in his left hand a metal bell.



capital city—was the national center for arts and crafts in which every intelligent Bushongo citizen took particular delight and pride.

Bushongo Crafts

One of the most important of Bushongo crafts was metal-working. The best smiths—mostly members of the Pianga subtribe—were accorded equal rank with members of the royal household. In addition, every heir to the throne was expected to have some knowledge of working metal by the time of his first initiation, at the age of eight. The three or four forges located in shelters on the outskirts of the town were often crowded with people. Children came to watch the red-hot metal being hammered into shape. Old men sat placidly, talking among themselves and asking the smith's opinion on matters of political interest. The smiths' furnaces were made of clay and shaped like a large bell. At the top of the bell the furnace broadened out into a short, wide cylinder. The large lower chamber was filled with charcoal, on top of which the smith laid pieces of limestone and the ore-bearing sand that was collected from the beds of nearby rivers. Two hand bellows, operated by the smith's assistants, projected into the side of the furnace and forced a continuous stream of air onto the charcoal, keeping it at white heat.

Toward the end of the day a few sparks of white-hot iron would fly up. This announced to the smith that his furnace would soon be clogged by the melting iron-sand and limestone sliding down inside it. After the furnace had been allowed to cool for a while, the side of the bell was broken and the red-hot mixture of iron and slag was pulled out onto a flat block of stone. Then the mixture was beaten with long, bat-shaped hammers to eliminate as much of the slag as



The king (above) always holds a sword when presiding over council. Below: An assistant of a metalsmith operates the bellows. Below left: Three knives. The two on the left are of steel, while the third (for night use) is wooden.





Misha Pelenge Che, king of the Bushongo around the year 1780. He is here shown in the traditional style of wood carving, sitting cross-legged in front of a drum. He was considered to be the one hundred seventh king in the royal line of the Bambala.

Three carved drinking cups. The center cup is carved in a pattern derived from weaving. Human figures show typical stylization, especially around the eyes.



possible before it became cold. Afterward, pieces weighing only a pound or so were hacked off the lump and heated in a small charcoal fire. When red hot, they were removed from the fire with tongs of green wood and placed on a small iron anvil. Now the smith began to shape them—a process involving several stages of reheating and hammering. The principal tools made were chisels (for the wood carvers), axes, adzes, hoes, broad leaf-shaped knives, spearheads, and swords.

In order to turn his people's thoughts away from war, Shamba had forbidden the manufacture of the shongo throwing knife even for ceremonial purposes. Soldiers carried swords, of course, but from Shamba's time onward, the army was concerned less with war than with police work within the nation. Other tribesmen carried only broad knives. Although useful for crop cutting and for work around the house, these knives had more symbolic than practical significance. A Bushongo did not consider himself properly dressed unless he had a knife stuck inside his belt. Accepting this need, Shamba had allowed his men to carry their knives. But he made one condition: on moonless nights, they had to be replaced with facsimiles made of wood.

This was a condition that kept the wood carvers busy, for many of the courtiers sported imitation knives with blades and handles carved with the most intricate shapes and patterns. In addition, the wood carvers spent their time making decorated doorposts for the houses of important families, and producing drums for the court dancers and musicians. But the best carvers delighted most in creating dishes, cups, pipes, and above all human figures. The statues of the kings, for instance, are exceptionally fine examples of Bushongo wood carving.

Bushongo noblemen prided themselves on their appear-



ance. Each rank of the nobility had its own distinctive style of hairdressing, although the hair was normally hidden beneath a fiber skullcap topped with a bunch of feathers. The nobles also reddened and scented their skin with powder made from the wood of the tukula (camwood) tree. And they were extremely proud of their richly embroidered skirts that resembled kilts except that they were gathered into loose folds rather than pleats.

These skirts were woven by the men, for it was considered wrong for women to make cloth. The weaver took dry, shredded strips made from leaves of the raffia palm and wound them onto shuttles. These were used on looms with frames made of the strong, light midribs of large palm leaves. When the cloth was cut off the loom bar, it was about three feet wide and six feet long, with a fringe at both ends. The most skillful weavers split the raffia into astonishingly fine filaments for both warp and weft, and thus produced a cloth as delicate as the highest quality linen. Weavers of the Bangongo subtribe varied the order in which the warp threads were raised when the shuttle was passed across them. In this way they produced complex damask designs of great beauty.

Embroidery, however, was a woman's task. First, she would dye the woven cloth, usually to a light-brown color,

Dance of the Bambala courtiers. Wearing gaily colored robes woven into traditional patterns with raffia fiber, waving weapons, and ringing bells, they combine to make a spectacular display.





The dance of the king's wives is a more sedate affair than that of the courtiers. In addition, the absence of feather headdresses and the uniformly colored clothes give it a more sober atmosphere.

The Bushongo are ■ musical people who have especially cultivated the rhythmical element. They take great care in decorating their drums. A simpler way of beating out a rhythm (below left) is the women's technique of banging gourds.



with a mixture made from roots and river mud. Next she took some of her embroidery fibers and boiled them in black or mauve vegetable dyes. She worked one stitch at a time, pulling a loop of fiber about an eighth of an inch through the cloth and then cutting it. A hundred such stitches produced about one square inch of pattern of a texture like that of a dull-surfaced velvet. Embroidering a whole skirt therefore required a great deal of time and infinite patience. The finest craftswomen knew hundreds of different patterns, many of them conventionalized forms of objects such as twigs or leaves. The patterns were meaningful symbols to every member of a Bushongo tribe. They appeared not only in embroidered skirts, rugs, and mats. They also formed the basis of many of the designs on carved woodware, such as bowls, cups, and pipes, and on decorated buffalo horn.

Religion and Initiation

Although Bumba, the Bambala's god, was the subject of many legends and myths, the religious life of the tribespeople was largely free of magic and ritual. The nyimi, as both king and god's representative on earth, held absolute temporal and spiritual power over his people. To most of



The old Bushongo embroidery (above) dates from the eighteenth century. This was produced by women, who inserted colored fibers into dyed cloth. This art form continues today.

his subjects these two components of his power were inextricably mixed. Although most of the Bushongo peoples regarded their god as the guiding spirit of the universe, they did not believe he concerned himself with the affairs of ordinary mortals. The only evidence of divine presence in a man, they believed, was his intelligence or his gift as artist or craftsman. To the Bushongo, the mentally retarded person was, literally, without god. When a person died, his spirit returned to Bumba.

The Bambala occupied themselves mainly with the here-and-now, especially in the often easy and creatively full life of the Mushenge. It is therefore not surprising that the initiation ceremonies of all Bambala boys were much less concerned with the supernatural than such ceremonies often are among primitive peoples. Boys underwent their first initiation ceremony at the age of about eight. They were put into a special enclosure for nine days and were there instructed in tribal law, the basic tenets of which had much in common with the Ten Commandments. The second, third, and fourth stages of initiation, each of which extended over a period of about a month, took place at the age of puberty. The central feature of each of these ceremonies was an ordeal by fear, although the boys were never physically harmed. The purpose of the ordeals was to teach them courage in the face of wild beasts, enemies, and ghosts.

For most of its citizens, the Mushenge was a good place to live in. The artistic and cultural life at court and in the streets could be enjoyed without the fears of food shortage or of being carried off into slavery. This was a fate common among many other peoples of central Africa at the time. The Bushongo reached no very high level in technology. But their control over their environment, their respect for the law, their determination to live at peace with their neighbors, and their delight in the creation of beautiful and useful things—all this enabled them to live a rich and varied life.

In our own century the Bushongo way of life has undergone many changes. Belgian intervention in the Congo started in 1885, but the Bushongo did not finally submit to the Europeans until after the failure of an uprising in 1904. During the present century, the Congo was a Belgian colony from 1908 to 1960. Throughout that time, the Bushongo were increasingly subject to the influences of the white man. They adopted his mode of dress, his pattern of working, many of his religious ideas, and the simpler items of his technology. Since the Congo became independent in 1960, however, all these influences have declined, and many of the old tribal loyalties have begun to reassert themselves.



This bronze head of a queen mother dates from the sixteenth century. It is a beautiful example of the court style of art. Three other very similar heads exist. They are stylized and therefore not accurate portraits.

The kingdom of Benin survives today, inland to the west of the River Niger. Once it extended as far as Lagos.



Bini of Nigeria

The city of Benin is situated in the Western Region of Nigeria, about eighty miles to the west of the Niger River delta and about sixty miles from the Gulf of Guinea. Here the low-lying coastal region is just within the northern limit of the tropical rain forest. The climate is hot and wet, especially during the summer season when heavy rains fall and the average day-and-night temperature is around 80°F.

Three centuries and more ago Benin City was the capital of a powerful African kingdom—the kingdom of the Bini people. These people were dwellers in open woodlands only because they themselves had cleared great patches of forest around their towns to make way for fields. In many ways they were a sophisticated people, for they carried the art of government and the division of labor to lengths undreamed of in most simple communities. Some of their crafts were as fine as those of highly developed civilizations.

This makes it all the more extraordinary that the great majority of people in Europe and America knew little or nothing about Benin until the end of the nineteenth century. Then they suddenly heard it described as “The City of Blood,” and its citizens denounced as “debased savages.” The way it came about was this. In 1897 an unarmed British mission was sent to Benin to persuade the *Oba* (king) to stop the slave trade and to put an end to the practice of human sacrifice in his kingdom. The mission set off in spite of objections by the Oba, who was engaged in a series of religious ceremonies. Before it reached Benin seven of its nine white members were massacred, together with one hundred forty of its hundred and eighty porters. A punitive expedition quickly followed. In giving an account of it, a British naval officer, Commander R. H. Bacon, described Benin’s history as “one long record of savagery of the most debased kind.”

However, it so happened that some members of that very expedition brought home trophies from Benin, including the first Benin bronze castings to be seen by white men for many years. These castings displayed such remarkable artistic sensitivity and technical skill that many people believed that the creative spirit behind them must have been of European origin. Yet it is now thought that these beautiful bronzes are an indigenous African art form. In the



Artist's reconstruction of Benin City as it appeared at the end of the nineteenth century. High walls divided the compounds from each other, and were thatched to withstand washing away by the rains. An early engraving of a scene in Benin City (below), made by De Bry in 1604, was inaccurate but showed the same basic plan.



brief sketch of old Benin that follows, we shall see how high artistic skill and seeming savagery came to coexist in one kingdom.

The Rise of Benin

According to legend, Benin was founded by a king from Ifé—a sacred Yoruba city about one hundred and ten miles to the northwest. He had come at the request of a number of warring petty states and turned them into a unified kingdom. Later, an Oba of Benin is said to have persuaded the King of Ifé to send one of his finest brass-smiths to teach the Bini the art of metalcasting. It is always difficult to check the accuracy of old legends of this kind. But there are certainly resemblances between Ifé and Bini bronzes, and both are cast by the same method. Moreover, Ifé seems to have reached its artistic zenith during the late thirteenth century—about the time that some authorities believe marks the emergence of Benin as a city-state.

If we try to trace the history of Benin still further back, by questioning the origins of Ifé, we have little real evidence to go on. We can only say that the Yoruba claim that one of their tribes was founded by immigrants from the Nile valley. We cannot accept this as an established fact. But we can say there are at least a few resemblances between the kingdoms



Two warriors with their attendants stand in front of a gateway to the Oba's palace. The bronze python on the tower symbolizes kingship.

Today this shrine, called Ugherhoba, is to be found inside the Oba's palace. On its top, old bronzes and carvings remain from Benin's past.



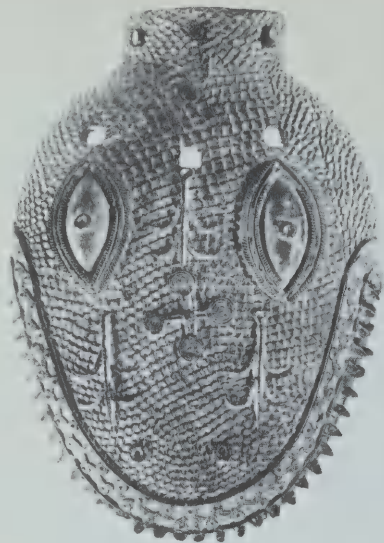
that flourished around the Niger a few hundred years ago and the ancient kingdom of Egypt. In both, the king was commonly regarded as being closely akin to the gods. And in both, the art of metalworking developed along similar lines.

Whatever the truth may be about the origin of Benin, we know that by the fifteenth century it had become one of the most important of many flourishing kingdoms between the Sahara Desert and the Gulf of Guinea. These Guinea States, as they are called, traded, and often fought, among themselves. More important, they formed part of a vast trading complex. This included not only the Islamic Negro kingdoms fringing the southern Sahara but also the whole of Islamic Africa stretching from Morocco to the Red Sea.

Benin in Its Heyday

The great period of Benin culture was from the fourteenth to the seventeenth century. By about 1650 the capital was a city more than twenty miles in circumference, bounded partly by a ten-foot-high earth wall and partly by a mixture of forest and swamp. It had thirty main thoroughfares, each about one hundred and twenty feet wide, linked by many narrower intersecting streets. The whole city was divided into wards, most of which were inhabited by members of specific craft guilds and their families. There were four or five wards for the blacksmiths, and similar numbers for the metalcasters and the wood- and ivory-carvers. Each ward was headed by a hereditary chief—a master craftsman who claimed descent from the founder of his particular craft. Every ward had its own priests, doctors, ceremonial officers, and representatives in the three “palace associations.” These transmitted the Oba's commands to the people. The city's houses—neat, rectangular buildings with red clay walls and roofs thatched with palm leaves—reflected the class structure of Bini society. Common people were allowed to build only up to three arm-lengths high. The families of craftsmen and nobles could go two arm-lengths higher. The palace of the Oba, however, was distinguished by having walls seven arm-lengths high.

A typical Benin family, especially among the higher grades of society, did not consist merely of a man, his wife, and his children. It also included his brothers and sons with their wives and children, together with a number of servants or slaves. These numerous families were accommodated in compounds, consisting of several houses grouped around an open courtyard. Many of the bigger houses contained a kitchen, workshops, storerooms and a well to supply water



This large python head, over one foot long, is part of a bronze serpent that was mounted over one of the gateways to the Oba's palace. Below: An ivory leopard. The spots are convex copper discs tapped into depressions carved in the surface.



for washing. Drinking water had to be brought from outside the city.

The royal palace, built around a whole series of large courtyards, was a veritable treasure house of Benin bronzes. In the great doorway of its main room stood a pair of magnificent ivory leopards. The walls were lined with row upon row of bronze plaques. Along the length of the pillar-supported roof and halfway down the wall above the doorway ran huge serpents of bronze with open jaws.

On market days the open spaces of the city were thronged with people buying and selling all kinds of goods from many lands. There were dealers in ivory, from among subject tribes who lived deep in the forest. There were merchants who had traded across the Sahara for the red coral beads that were so important in Benin as marks of rank. There were local women selling earthenware pots. There were people offering bronze from old European cannon that they had bought from ports along the coast. And there were traders from the north who had brought leatherwork to the market, and perhaps a few horses or mules that might find buyers among the court officials.

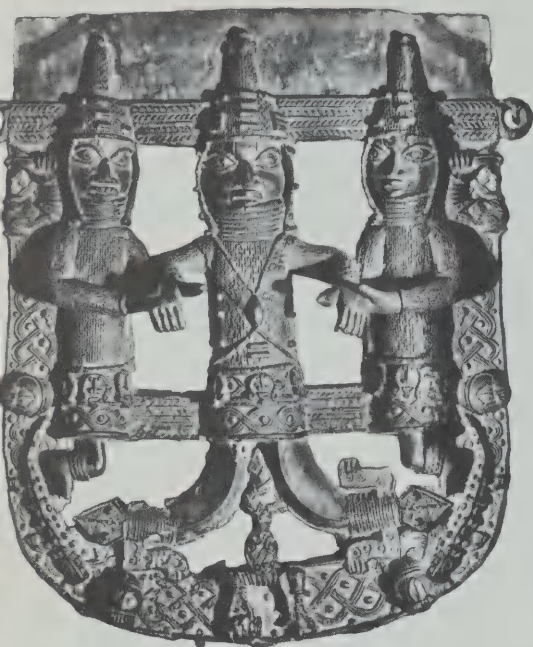
All in all, for size, magnificence, and bustle of trade, Benin compared favorably with many a European city of the same period. In importance it undoubtedly surpassed the capitals of some of Europe's petty principalities, for it was the center of a prosperous state whose king could raise an army of eighty thousand men when need arose. Its territory stretched from the Niger delta in the east to beyond what is now Porto Novo (Dahomey) in the west. Among the tributary people of Benin were the citizens of Lagos, now the capital of Nigeria.

Benin's sizable foreign trade was confined almost exclusively to luxury goods. To balance their imports of coral, cowrie shells, copper, bronze, horses, and fine leatherwork, the Bini exported gold dust, ivory, and kola nuts. These last provided a stimulant much prized by Arab peoples, who, as followers of Mohammed, were forbidden to drink alcohol. International trade in luxury goods can flourish only between peoples living in societies that have an affluent class. The existence of an affluent class demands a system of agriculture that can feed more people than those actually engaged in agricultural labor. The Bini had such a system. The clay soil of the flat river delta region was extremely fertile, and in a hot, wet climate it yielded abundant crops of yams, millet, fruits, and spices. Most of the work of planting, hoeing, and harvesting was done by slaves recruited from other tribes. The family of any man of rank





A bronze plaque, produced by the *cire-perdue* technique (see text), shows an *Oba* supported by kneeling attendants. He wears a bead costume, coral anklets, and from his waist hang ornamental leopard masks.



Above: Plaque showing the Oba Ohe, who probably reigned during the fourteenth century. He was thought to have been possessed by Olokun, a river god, and is always shown with mudfish in place of legs. Below: The Oba of Benin today. He is here seen being anointed with "medicine" by a cult priest.



would seldom visit the plantations outside the town except at times of festival.

Ancestors and Oba

The Bini, like the Bushongo, were ancestor worshippers. When a man died, his eldest son became priest for the remainder of the family. He placed upon the family altar a great wooden ram's head, and perhaps sacrificed a slave. The spirits of the traditional founders of various crafts were also the objects of worship. Each metalcaster's ward of Benin, for instance, had shrines where the traditional Ifé founder of Bini bronze casting was worshipped.

The cult of ancestor worship reached its pinnacle in the person of the Oba, who was regarded as the reincarnation of former kings. As such, he possessed supernatural powers that had to be nourished or propitiated by constant rituals and sacrifices. The Oba was rarely seen in public except on religious ceremonial occasions. As among the Bushongo kings, his body could not make contact with the ground. In processions through the city he was either carried in a litter or rode sidesaddle on one of the imported Arab horses. On such occasions he was accompanied by a vast throng of his courtiers and wives.

The Oba's rights and powers were enormous. Twice every year he received a tribute of food from all the towns and villages in his kingdom. He exacted tolls from all foreign visitors entering his capital, and special taxes from those who wished to sell in its markets. All war booty—notably slaves—belonged to him, and so did all the products of Bini's finest craftsmen. Most amazing of all, every boy in the kingdom was regarded as the Oba's property until he was grown up and married. Only after he was married and had been presented to the king was a young man allowed to wear clothes—perhaps when he was twenty years old and had already served in the army. (Girls, too, went naked until marriage, but they were not the Oba's property as boys were.) However, the Oba was not so much an accumulator of wealth as a redistributor. From all the taxes he collected came the means of administering the affairs of his kingdom. And although the products of Bini craftsmen were his, he paid for their labor with generous gifts of food and slaves. In this way he became a kind of royal patron of the arts.

Much of the Oba's political power was dispensed through his control of three "palace associations," as they were called. These associations, which could confer political and economic privileges upon their members, were each divided into five grades. The rights and privileges of the two senior



An early view (1668) of Benin City. It is imaginative in part, with exaggerated palace towers. In the foreground rides the Oba, with musicians, dwarf jesters, and tame leopards. He is followed by his army.

grades were hereditary. Those of the three lower grades were for life or for a specific period of time. Membership of the nonhereditary grades could be obtained only by undergoing an initiation ceremony and by paying a large fee. Similarly, chiefs of Bini villages and of subject peoples had to undergo initiation before their authority was recognized in the capital.

Craftsmen of Benin

In old Benin, as in most modern cities, several crafts were practiced at two distinct levels—the amateur, do-it-yourself, level and the professional level. Most women, for instance, could and did make pots for cooking and for storing millet. But not all of them were good at it, so there was also a class of professional potters whose work found a ready sale in the markets. The potters lived in their own district of Benin, near the clay pits. They used no machinery, but simply coiled the vessels by hand, occasionally using a tough gourd skin as a turntable. When making big storage pots, the men potters walked round and round the growing vessel as they wound on the thick rolls of clay and beat them into shape. Firing—which could be done only in the dry season—was simply a matter of heaping wood over a pile of well-dried pots and setting light to it. This process often cracked about a third of the pots.



The weapon carried by this mounted warrior is a throwing spear.

Most Bini families, too, wove their own cotton cloth. Some did their own dyeing, using indigo grown in their gardens or bought in prepared blocks from the market. But here, again, the best results were obtained by going to the professional. The professional dyers usually began by stitching up the cloth in places, or by tying seeds and small stones here and there in folds of the material. Then they dipped it first into a bath of hot dye and next into a solution that would “fix” the color. Finally, when the cloth was dry, they unpicked the stitches and removed the seeds and pebbles, revealing delicate patterns of white and pale blue on the dark indigo background. The Oba and his court officials, however, shunned dyed cloth and preferred fine white cloth woven by skilled men working on broad, upright looms. This cloth was decorated with strips of red flannel and coral beads.

Other skilled craftsmen of Benin included the blacksmiths, who made iron spears, tools, swords, daggers, and bracelets. There were also the wood and ivory-carvers, who specialized in making altar decorations and staves carved with figures representing various deities. But the pride of Bini culture, and the nation’s most important contribution to African art, was the work of the metalcasters. The method of casting was by the *cire-perdue*, or “lost-wax,” process. This process was known in antiquity to the metalworkers of the Nile valley, and it was used in many parts of West Africa from at least the twelfth century onward. But nowhere was it ever employed with greater technical and artistic skill than in Benin.

Many of the best bronzes were plaques consisting of one or more figures in high relief on a flat backing. The first stage in production was the modeling of the figure and the flat background in beeswax. The artist molded the basic shape of the figure from a single lump of wax. Then he added smaller features, such as hands, nose, and items of clothing in strips of wax that he had softened by kneading. Lastly, he added fine details and decorative patterns with the help of a small iron chisel, both on the figure and all over the wax background.

The wax plate was now cut free at the back so as to leave it as a thin hollow shell. This was filled with a mixture of charcoal and red clay, through which wax rods were inserted. The whole figure, complete on the plaque, and backed with the clay-charcoal mixture, was next coated with a very fine, smooth paste made of clay and river mud. When this had been allowed to dry, thicker coatings of clay were added.



A warrior chief flanked by two of his soldiers. Each soldier has an attendant, one of whom blows a horn.

In this fragment of a bronze plaque we see a Bini hunter shooting at an ibis. The work is imaginative and free from the rigid conventions of most Benin art.





A bronze "altar of the Hand," worshipped because of the Hand's power of accomplishing things. On top is the queen holding two ceremonial swords. Below her the *Oba* holds a staff and a gourd. On the lowest tier are two hands.

This clay, with the delicate wax figure embedded inside it, was then stood up in a sloping position in a trench near a furnace. The wax melted and was carefully poured out through the holes left by the rods, leaving an empty clay mold. The mold was then heated further until it was baked hard like terra cotta, a clay, and all was ready for the actual casting to begin. A white-hot crucible filled with molten bronze was lifted from the furnace with a stout pair of tongs. Its pink liquid metal was poured through the holes into the mold and left to cool. Then the clay was broken away. Within, stained here and there with particles of red clay, was a perfect bronze replica of the original wax model. All that remained to be done was to clean and polish it.

Benin bronzes were mainly commemorative in subject. Many represented contemporary or past Obas. Others recorded Bini victories in war. Some, made in the sixteenth and seventeenth centuries, showed Portuguese soldiers armed with crossbows or with matchlock guns or muskets. These are reminders of the period when the Portuguese helped the Bini in several campaigns.

Slavery and Decline

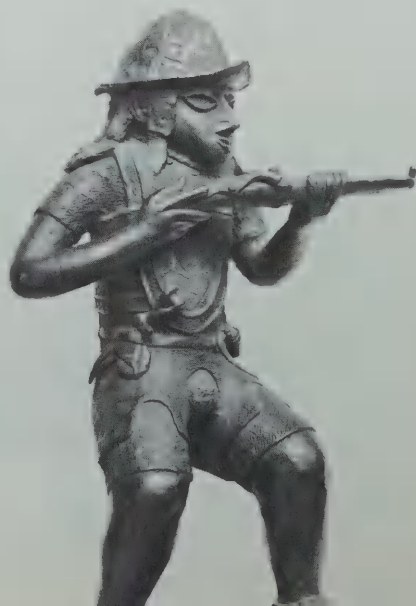
Although the old culture of Benin relied heavily on slaves, those slaves had a clearly defined place in society. They were household servants or agricultural laborers, and on the whole they were well treated. But the character of slavery in West Africa underwent a drastic change with the arrival of European slavers from Portugal, Holland, England, and France. It has been calculated that from the sixteenth to the nineteenth century about fifteen million Africans arrived in the Americas. Many more died on the journey from the Guinea coast—a high proportion from ports along the Bight of Benin. During the eighteenth century alone, about one hundred thousand young men and women were exported from Guinea every year. The sheer numbers of slaves that the Europeans demanded, and the price—largely in guns—that they were willing to pay, radically altered both the relationship between the whites and the Africans. It also changed the way of life within the Guinea States themselves.

The market for slaves began gradually with the colonization of the West Indies. In many cases the need could at first be met by the sale of household servants or of convicted criminals. But as the demands of the Europeans intensified, the kings of the city-states began to mount special slaving expeditions into neighboring territories. Later still, some rulers began selling their own tribespeople. Free men and



A soldier of another tribe, on horseback, has been speared through the back by a Bini warrior chief.

A Portuguese musketeer. The Bini were helped by the Portuguese in their military campaigns.





A bronze figure dating from the sixteenth century. The cross he wears suggests that he was one of the princes commanded by a sixteenth-century Oba to become Christian in return for Portuguese help.

A set of mud figures, made in recent years for a shrine dedicated to the river god Olokun. The art of modeling in mud predates that of bronze-working, and is indigenous.

women were obliged by law to deliver their sons and daughters into slavery. Finally, during the nineteenth century, slaving took on a new ritualistic significance for the Benin kings. In times of national crisis, they engaged in mass sacrifices of slaves, perhaps in a last vainglorious attempt to assert their declining power.

It is difficult to trace systematically all the way in which the slave trade led to the degeneration of the Guinea States. Certainly the scramble for slaves, and the consequent anarchy throughout the region, led to a steep decline in commerce and general cultural exchange between Guinea and North Africa. Doubtless, too, the brutality of the trade had deep psychological effects on the Africans, hunters and hunted alike. Almost certainly we can ascribe the increasing coarseness of Benin art during the eighteenth and nineteenth centuries to the cultural and economic ruin that the slave trade brought in its train. Benin was certainly in decline before the British expedition of 1897 visited it. The collection of scattered, ramshackle huts surrounding a dilapidated king's residence that Commander Bacon reported were all that remained of the great and prosperous city of three hundred years before.

Today Benin City has to some extent revived. There is still an Oba, considered to be the thirty-eighth in line of succession in the dynasty. The city is divided by a broad street, and there are more than forty wards. Craft specialists continue their work, and members of the wards have special duties to perform for the Oba. Slavery, however, is gone. So is political power. And although *cire-perdue* bronze-casting continues, its refined beauty, like the glory of old Benin, has vanished.





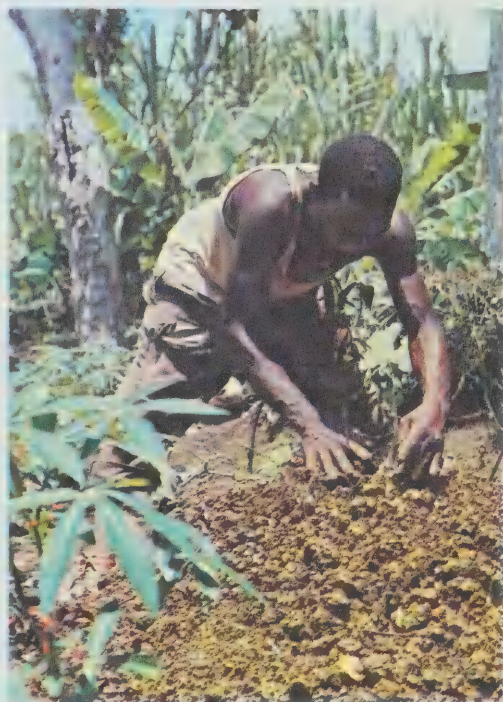
Top: An eighteenth-century engraving shows the social background from which the Maroons emerged. On the Jamaica coastline, by a cove in which the ships of merchant adventurers lie at anchor, a British plantation owner rides up to his slaves. The slaves who fled from plantations to become the Maroons settled in the densely forested hills of inland Jamaica, where they created a new way of life for themselves. Their new environment is seen in the aerial photograph of the Cockpit Mountains (bottom).

7 CULTURE CONFLICTS IN A CHANGING WORLD

Maroons of Jamaica

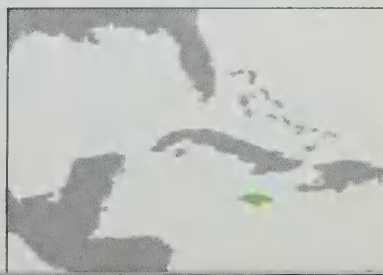
So far we have been looking at the lives of various peoples mainly before they came under the influence of European civilization. In this chapter we shall consider some of the effects of the collision—often a violent one—between European culture and that of less advanced peoples. Nowhere, perhaps, was the result of this culture conflict more remarkable than in Jamaica. There it not only produced a new way of life, but actually welded together a new people—the Maroons.

Jamaica lies almost in the middle of the Caribbean Sea, about ninety miles south of Cuba. Some hundred and forty-five miles long and fifty miles across at its widest, it is dominated by an almost continuous chain of thickly forested mountains running most of the length of the island from east to west. Their highest point is Blue Mountain Peak, near the eastern end of the island, which rises to seventy-four hundred feet. Climatic differences between the lowlying coastal areas and the mountainous interior are considerable. In coastal areas the average temperature throughout the year is more than 80°F. In the upland regions the average is as much as ten degrees lower. Rainfall, too, varies widely between neighboring areas. Kingston, for instance, seldom receives more than thirty-five inches annually, while parts of the Blue Mountains, only fifteen miles to the north-east, may receive as much as two hundred inches.



Having fled the plantations, the Maroons turned to small-scale agriculture, which still continues. Here a present-day Maroon is seen planting crops. In the background, young banana plants can be seen.

Jamaica, one hundred and forty-five miles long, is an island in the Caribbean Sea (below). Map (left) shows the main settlements of the Maroons mentioned in the text.



When Columbus discovered Jamaica in 1494 he found the island thinly peopled by Arawak Indians who had migrated from South America perhaps five hundred years earlier. Spain colonized the island in 1509 and enslaved the Arawaks. The Spaniards then forced them to farm the land, dig (fruitlessly) for gold, and build a town at present-day St. Ann's Bay on the north coast. Later, the Spanish established their main base at Villa de la Vega (now Spanish Town, west of Kingston).

By 1550 only a few Arawak families had survived, living a primitive life in the forested mountains of the interior. Most of them had been wiped out—many from diseases brought to the island by the Spaniards. Others had died through the hardships of slavery. And still others had been killed by Spanish “sportsmen” who liked to hunt the diminishing bands of Arawaks who lived in the mountains. To strengthen their depleted labor force, the Spanish then began to buy Negro slaves shipped from Africa.

Throughout its century and a half of Spanish rule, Jamaica was frequently under attack from pirates and from naval squadrons from England and France, Spain's colonial rivals in the Caribbean. Eventually, in 1655, English forces landed in considerable strength on the south coast. The Spanish, realizing that this was no mere raid but a full-scale invasion, retreated into the interior. From there they continued to harass the English for three years. Finally, in 1658, the last of the Spanish forces escaped to Cuba. They left behind them a number of Negro slaves, who established small, isolated communities in the mountains.

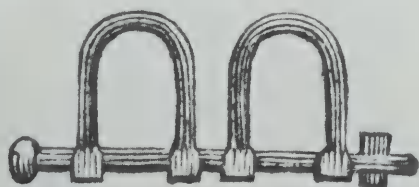
The English at once began to colonize the island and to

TO BE SOLD & LET
BY PUBLIC AUCTION,
On **MONDAY the 18th of MAY, 1829,**
UNDER THE TREE,
FOR SALE,
THE THREE FOLLOWING
SLAVES,
VIZ.
HARRISAL, about 60 Years old, an excellent House Servant, of Good Character.
WILLIAM, about 55 Years old, a Laborer.
NANCY, an excellent House Servant and Nurse.
The above standing in "LONDON" Street, and the WHOLE to BE LET.
On the usual conditions of the Slave Trading Ship, in Port, &c. to and Malacca
TO BE LET,
MALE and FEMALE
SLAVES,
ROBERT BAGLEY, about 30 Years old, a good House Servant.
WILLIAM BAGLEY, about 30 Years old, a Laborer.
JOHN BAGLEY, about 30 Years old, a Laborer.
JACK BAGLEY, about 30 Years old, a Laborer.
PHILIP, an excellent House Servant.
WILLIAM, about 30 Years old, a good House Servant.
LUCY, a young woman of good Character, used in House Work and the Nursery.
FANNY, about 30 Years old, a good House Servant.
CLARA, an excellent House Servant.
HARRISAL, about 60 Years old, a good House Servant.
Also for Sale, at Eleven o'clock,
Fine Rice, Gram, Paddy, Books, Muslins,
Needles, Pins, Ribbons, &c, &c.
AT ONE O'CLOCK, THAT CELEBRATED ENGLISH HORSE
BLUCHER,

Slave auctions were a regular feature of Jamaican life in the settler days. Besides outright sale, slaves could be “let,” or hired.

Cruel punishments were meted out for the least offense. One instrument used was the “treadmill.” Slaves were tied by their wrists to a rail, above a revolving cylinder with sharp projecting boards. If they failed to keep step, their legs would be lacerated.





import slaves of their own. A census taken in 1662 showed a population of 3450, of whom almost six hundred were slaves. Many of the white colonists were convicted thieves, debtors, and political prisoners. Originally, the English had prized Jamaica as a base from which their ships could sail on voyages of plunder to the Spanish settlements in the Caribbean and on the American mainland. But within a few years the island became important in itself as a source of sugar. The settlers began to cultivate and process the indigenous sugar cane, and by the mid-eighteenth century Jamaica had become the world's largest producer of sugar. Hundreds of thousands of slaves were brought in to work on the rapidly expanding plantations.

Most of these slaves came from what are now the West African states of Nigeria, Ghana, Ivory Coast, Liberia, Angola, and Sierra Leone. Many of them were submissive to their European masters—often because they had grown up among peoples who had long been in subjugation to more powerful tribes in Africa. But the slaves in greatest demand were the Ashanti from Ghana, a tall and proud warrior people who, although they tended to be rebellious, were valued because of their strength.

From the first, the English treated their slaves no better than other colonial peoples. For insubordination, a slave could be whipped until the skin was flayed from his back. For desertion or refusal to work, he would commonly be chained to a stake and slowly roasted alive. Marriage and family life among slaves was forbidden. A female slave was regarded both as a worker and as a producer of more slaves, who automatically became the property of her white master. Not surprisingly, the mortality rate was high. As late as 1831, a report to the Jamaican Assembly showed that in one parish the average slave died in his mid-twenties.

The Maroon Wars

From the first years of English rule a trickle of slaves, mostly Ashanti, escaped from the cruelty and grinding toil of the plantations and made their way into the forest-clad mountains. There they joined the small bands of dark-skinned, curly-haired people who were the descendants of the Negro slaves and the very few Arawaks that the Spanish had left in the interior. The Spanish had called their runaways *cimarrones* (roughly, "wild ones"), a name that the English later corrupted into "Maroons." The Maroons, reinforced by a steady flow of refugees from the plantations, grew in numbers. By the end of the seventeenth century,

Headframes to prevent eating, hooks, shackles, yokes, and heavy weights as obstacles to escape—these were common methods of slave control.



there were perhaps five hundred of them in two well-established settlements—one in the Cockpit Mountains, southeast of the present town of Montego Bay, the other in the Blue Mountains, northeast of Kingston. They lived mainly by hunting—there were plenty of wild boars in the mountain forests—and by food-gathering. Later, as their confidence in their strength grew, they began to mount raids on the lowland plantations. They killed the planters, burned their houses, and seized as much food, arms, and ammunition as they could carry away with them. Often, they captured female slaves and encouraged the bolder males to escape with them.

During the first four decades of the eighteenth century the Maroons spread fear and panic among even the largest and best-defended plantations. Neither the planters nor the Governor's army knew where they would strike next. The Maroons seemed to have spies everywhere who kept them informed of the location of troops at any given moment. Their lightning raids were usually over before the militia could be assembled in force to engage them. Throughout this period, the Jamaican House of Assembly was continually calling on the Governor to "pursue, suppress, and destroy the rebellious and runaway slaves." Almost invariably, the troops dispatched for this purpose were defeated and suffered heavy casualties. The government forces were unquestionably larger and better armed than those of the Maroons, but the rebels had developed a matchless skill in the art of guerrilla warfare. They rarely fought it out with the militia in the open valleys. Instead they retreated step by

Above: An aerial photograph of the village of Accompong where some Maroons still live. During the fighting between the British and the Maroons in the early eighteenth century some Maroons were captured (below) but usually they were victorious. One of their leaders, named Cudjoe, finally signed a peace treaty with the British in 1739 (below right).





Above: Trelawny Town, under attack by British troops, seen approaching by the mountain path at left. The Maroons attempt to ambush the attackers. The town was later razed and its inhabitants deported.

step into their mountain strongholds, or “cockpits,” where, camouflaged with leaves and branches, they lured the soldiers into ambushes. Although always short of guns and ammunition, the Maroons developed into expert marksmen and rarely wasted a shot.

By 1730 the Maroons were dominated by descendants of the Ashanti. Their chief was a woman called Accompong Nanni, who exercised much the same power and influence as an Ashanti Queen Mother. There were also four guerrilla leaders: Cudjoe, the most brilliant, who was in charge of the large Blue Mountains contingent; Accompong Johnny, who commanded the Cockpit Mountain settlement; Quaco, leader in the eastern end of the island; and Cuffee, who led another Blue Mountain group. Their Ashanti origin is evident in the names of all these men. An Ashanti child was always given, as one of its names, the day of the week on which it was born. Cudjoe was the closest the Europeans could get to pronouncing *Kojo*, the Ashanti word for Monday. Quaco was derived from *Kwaku*—Wednesday. Cuffee came from *Kofi*, meaning Friday. Accompong, a name common among the Maroons, was derived from *Nyankopong*, the sky god or supreme being of the Ashanti.

During the 1730s the government intensified its efforts to subdue the Maroons, but met with little success. Then in 1738 Colonel John Guthrie, a former planter who had often fought against the Maroons, suggested to Governor Edward Trelawny that the only way to bring peace to the island was to offer the Maroons independence. Trelawny agreed and sent Guthrie to negotiate a settlement with Cudjoe. Accord-





Scenes of present-day Maroon life. Above: A Maroon cultivating his plot. Below: Maroons selling their wares at the market in Maggotty.

ingly a treaty was signed by Cudjoe and Guthrie in March 1739. A few months later a similar treaty was made with Quaco. Both treaties guaranteed the Maroons complete self-government within their own mountain territories. These territories included fifteen hundred acres of land in the Cockpit Mountains and a similar area near the eastern end of the island. Five Maroon villages were founded, the largest being Accompong and Trelawny Town in the Cockpits and Moore Town in the east. The Maroons, who were exempted from paying taxes—a privilege they retain to this day—were given the right to cultivate their lands and to sell any surplus food in the valley markets. They were also permitted to hunt anywhere outside their territories except within three miles of towns or plantations. Cudjoe and Quaco became, in effect, absolute rulers of their respective regions, and lines of succession were established. The main curb on their legal powers was that anyone accused of murder within their territories—and there were very few—must be tried by European judges.

In the perspective of history, perhaps the most significant article in the treaty was the Maroons' pledge to help the Governor to crush slave rebellions and not to give asylum to runaway slaves. This pledge was not always kept. But by the very act of making it, the Maroons effectively doomed to failure many later attempts of the slaves to improve their lot by violent means. With the assurance of wholehearted Maroon help, some of these efforts might have succeeded.

Life in the Maroon Settlements

The struggle for existence was hard for the Maroons in their newly independent territories. They had only the machete for clearing the thick forest that covered their land, and only the hoe for tilling the soil. Moreover, much of the country was mountainous and fissured with deep ravines—hardly ideal land for cultivation. Yet by the end of the eighteenth century they had become skillful farmers, cultivating plantains, corn, yams, and other roots. In smaller garden plots they grew vegetables and such fruits as the avocado and the pineapple. They bred cattle and pigs and also kept poultry. They built roads between their settlements and the lowlands and made a living by trading their crop surpluses in the towns, as they still do today.

Before the abolition of slavery in 1833, missionaries in Jamaica were forbidden to teach the Negroes how to read or write but were permitted to give simple religious instruction. Two factors helped the rapid spread of Christianity. First, the slaves were naturally quick to embrace a creed that



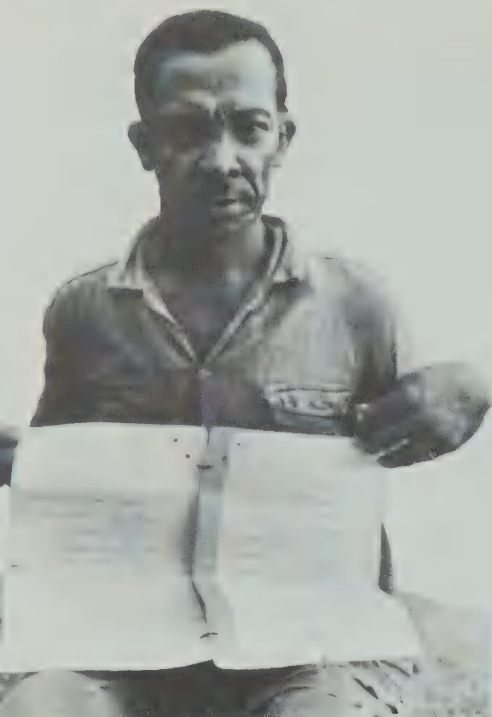
Namba Roy, a twentieth-century Maroon artist, painted this creation myth. Iyaloda, Mother of the World, breathes life into the people, who were made of clay and oven-baked. Some were baked too little—these became light-colored people. Others were burned and became black people.



held out hope of salvation, even if it could not at once lift the almost intolerable burden of slavery. Second, most (although not all) missionaries strongly supported the struggle for the abolition of slavery. Many of the slaves, and the ex-slaves who had escaped to the mountains, thus joined one or other of the various Baptist missions on the island. But during the nineteenth century some of the Negro leaders quarreled with the missionaries and began to establish their own Baptist sects. In these, Christian beliefs were blended with many of the rites and usages of Black Africa. This applied particularly to the Maroon settlements, where Ashanti social organization and customs had become firmly established. At chapel services in the mountains the people would go into trances and become inspired by spirits.

But perhaps the African cultural tradition is seen most vividly in the rich “spoken literature” of the people. This contains a store of legends about magic and the spirit world. Best known are the Anancy stories, which are the source of the Brer Rabbit tales of the southern United States. These stories still retain the strong African flavor of their origin in the Anansi Spider stories of the Ashanti. Anancy, or Brer Nancy, was a thin little man who had many adventures with

This wood carving by Namba Roy shows Brer Nancy, a little brown mischief-maker in Maroon legend.



Mann Rawe, a Maroon from Accompong, is here seen holding the hard-won peace treaty (1739) between his ancestors and the English Government.

Out of a gourd and plastic wood Namba Roy created this mask, called "He who fears the spirits." It conveys the Maroons' sense of awe toward the supernatural.



animals and spirits in both the real and the imaginary world. His exploits got him into constant trouble but usually taught a moral lesson.

The Dilemma of Independence

The Maroons were the first colonial people to win self-determination within the British Empire, and they have preserved a considerable measure of independence to this day. Yet now little seems to be gained by their comparative isolation from the rest of the Jamaican community. The territory of the fifteen hundred inhabitants of Accompong even now extends over only forty-three hundred acres—just under seven square miles. Accompong itself, consists of a group of houses, a few stores and rumshops, a school, and a chapel.

In the beginning, the Maroons' isolation from the main current of Jamaican life had a vital significance, for it was the means of their deliverance from slavery. If their life was hard, they were at least masters of their fate, with a sense of pride and self-respect that the slaves could never know. For many years after the abolition of slavery, too, the Maroons were doubtless better off than most of their Negro neighbors. Yet although legally free, their freedom actually extended only as far as choosing between starvation and laboring long hours for pitifully small wages.

In the long run, history has favored the ex-slaves at the expense of the Maroons. In rejecting a life of slavery, the Maroons also rejected eighteenth-century European culture in its entirety, and sought to re-create the patterns of life of their African ancestors. But it was European culture that contained the seeds of the technological revolution that is now transforming life in Jamaica as in other hitherto under-developed countries. The Maroons' freedom isolated them from this tide of change, and from the social revolution that followed in its train. Today, there is still much poverty on the island—with sharp class distinctions based on wealth. But the ancestors of the slaves have the promise of a more prosperous life ahead of them than the Maroons. At present there are perhaps four thousand Maroons on the island, mainly in Accompong and Moore Town. A growing number of the young people are leaving the Maroon territories to seek work in Kingston and other towns and on the lowland plantations, where they can earn money and gain status. Probably it is this process of casual integration, rather than any formal renunciation of independence, that will bring about the eventual decay of the old bastions of liberty in the mountains.

Zulus of South Africa

The province of Natal in the Republic of South Africa rises westward from the Indian Ocean in a series of steps. From the bush-covered flatlands of the coast rise wooded hills of gradually increasing height. Beyond them, about one hundred miles inland and at about three thousand feet above sea level, stretch open, rolling prairies. These are interrupted here and there by wooded river valleys and terminated at their western edge in the lofty Drakensberg Mountains. Until the mid-nineteenth century the country was rich in fauna. The woods and forests of the coast and more easterly river valleys were the home of the elephant, rhinoceros, hippopotamus, and crocodile. Out on the cooler and more bracing prairies roamed herds of eland, hartebeest, springbok, and waterbuck that were preyed on by lions, leopards, and hyena.

It was the high prairie (or *veld*, as it is called in South Africa), about one hundred miles due north of the present city of Durban, that became the homeland of the Zulus, a clan of the cattle-farming Nguni Bantu. The Nguni were, it is believed, originally inhabitants of country many hundreds of miles to the north—possibly as far away as Uganda. They began their southward migrations in the mid-fifteenth century and eventually colonized large areas of the Rhodesias and South and Southwest Africa. The Zulus took their name from the founder of the clan, a young Nguni chief who, some time in the seventeenth century, left his family settlement to establish his own in neighboring territory. Until the beginning of the nineteenth century the Zulus—at that time numbering perhaps two thousand people—occupied an area of only about two hundred square miles. The great explosion of Zulu martial power and territorial conquest was yet to come.

Life Among the Zulus

The basic unit of Zulu social life then, as today, was the *kraal* (a Dutch word used by the early European settlers, meaning an enclosed village). The kraals each consisted of



A Zulu chieftain today. He maintains in his bearing the pride of his warrior ancestors, who made the Zulus feared throughout what is now Natal.

Eastern South Africa, showing the extent of Shaka's empire (light brown). Originally the Zulu tribe occupied the small area (dark brown) north of the Tugela River.





George Angas drew this sketch of the inside of a Zulu kraal in the 1840s. It is morning, and the cattle are being milked before being taken out to pasture.

The large beehive huts of a Zulu kraal are ranged along the inside of the boundary fence. In the everyday scene below, a skin has been pegged out to dry before being used. In the foreground a man cuts sticks to make a hut door.



a circle of dome-shaped huts enclosing a cattle fold. They were spread out across the prairie at intervals of about half a mile to a mile. The head of a kraal was a family elder, who occupied the largest hut. Each of the other huts was occupied by one of his several wives and her children. The kraal head had complete control over life in his homestead. He ruled as a usually benevolent despot over his wives and children who, in Zulu law, were his private property. His most senior wives, or those he most favored, occupied the huts nearest to his. Thus, on entering a kraal, it was easy for a visitor to assess the relative importance or influence of each wife and her family. Each kraal had major or minor status within the clan, according to the importance of its headman. Zulu wealth was based upon cattle. If a headman had many cattle he could afford to have more wives—usually purchased at the rate of one wife for about five cows—than his less affluent neighbors, and thus a larger and more impressive kraal.

The kraal was a self-supporting unit. All its members of six years or older had particular kinds of work to do, according to their age and sex. The boys and young men looked after the cattle and built and maintained the kraal huts and fences. The ring of huts was enclosed by a thick, high thorn fence—similar to that surrounding the Masai village—to keep out marauding lions and leopards. In the larger kraals there was often a second fence between the huts and the central cattle fold. The huts were made of wattles lashed together with rush cords and thatched with grass. They were warm in winter, cool in summer and, moreover, could be shifted from place to place without being dismantled. They were usually about twelve feet in diameter. In the center of the smooth, hard earth floor was a shallow fireplace. Smoke from the wood fire escaped through interstices in the hut wall. The entrance to the hut was simply a narrow opening about three feet high.

The younger boys drove the cattle onto the veld at first light and brought them back to the kraal for milking just before noon. Then, after the boys had eaten their first meal of the day, they drove the cattle out once more and returned with them at dusk. Between the ages of six and sixteen a Zulu boy spent almost his whole waking life on the veld, tending his herds and learning the ways of nature. During this period his responsibilities increased with age. The older boys, armed only with an *assegai*, or spear, were expected to defend their cattle against attack from lions and leopards.

The women and girls were responsible for household chores and for cultivating the garden plots that lay outside



Zulu warriors arrayed themselves in elaborate headdresses of ostrich plumes and the long tail feathers of cranes, with flaps of leopardskin behind the head. Each regiment had its own uniform.

the kraal fence. They tilled the soil with simple, ironheaded hoes. Their main crops were millet, corn, and the sweet potato. Most wives and older daughters spent the mornings and most of the afternoons in the gardens, turning the soil, planting, weeding, or gathering the crops according to the season. The younger girls swept out the huts and the surrounding yard, collected water from nearby streams, and looked after the babies. The two daily meals—one at mid-day, the other at dusk—were usually cooked by one of the older girls. They consisted of millet stews, roasted corncocks, boiled potatoes, or similar dishes. The Zulus rarely ate meat except when they killed oxen or goats on ceremonial or religious occasions.

To the modern European, the traditional life of the Zulus (which still persists in parts of Zululand) was industrious and apparently happy. But it was certainly backward in terms of material culture. True, they knew the art of metal-working, but their smiths rarely made anything other than spear, ax, and hoe blades. The Zulu houses were simple and strictly utilitarian affairs. The people wore few garments except short aprons of leather or, in the case of some of the men, kilts made from the tails of their cattle. They had no knowledge of how to weave cloth. Their food consisted of a few simple variations on perhaps half a dozen crops. Their pottery, used mainly for food storage, was very simple and rarely ornamented. Yet, in the second two decades of the nineteenth century, this minor Nguni clan forged an empire some eighty thousand square miles in area, and controlled the most feared and powerful fighting force ever known in black Africa.

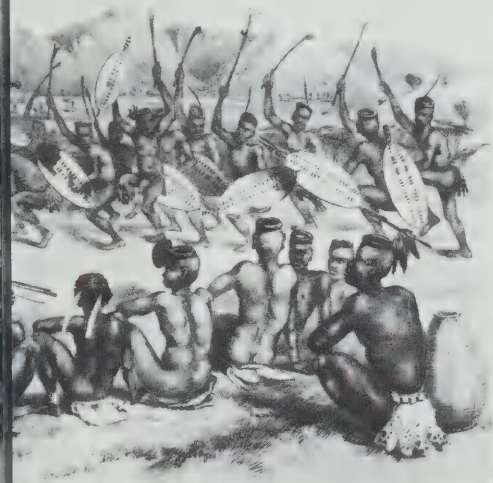
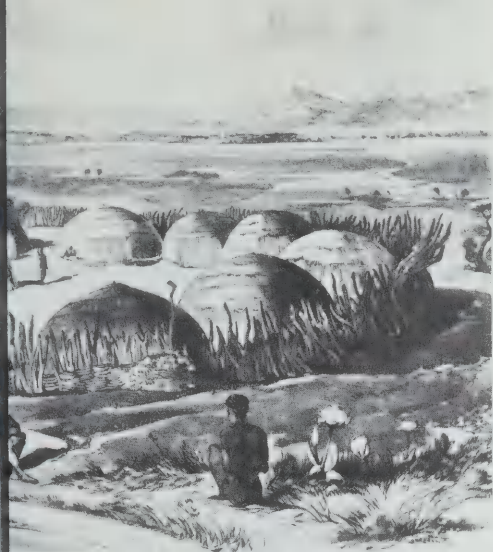
We have seen, during the course of this book, that it is often wrong to assume that a people are unintelligent or "savage" simply because their technology is backward. Cultural complexity and richness may show itself in many ways besides that of technical or artistic sophistication. The Zulus provide an example of this. They could neither read nor write, yet their language, one of the Nguni dialects, was based upon one of the most complex grammars in the world and had a vocabulary of some nineteen thousand words (only about a thousand fewer than Shakespeare used in his plays). And since the Zulus had no means of preserving their vocabulary by written records, it follows that most of these words were in common use.

Again, Zulu social organization was not only complicated but surprisingly in tune with that of more technically advanced societies. A group of neighboring kraals, commonly



Top: A kraal near the Umlazi River, showing Zulus at rest during the daytime. Besides the stockade around the kraal, windbreaks were erected in front of the hut doors.





A Zulu hunting dance (middle), performed before setting out in search of buffalo and antelopes.

Zulu blacksmiths (below left) made hoes, assegais, and carving knives of iron. They also made brass ornaments like the armband of honor (below), awarded for valor in battle.



linked by close blood ties between their headmen, constituted a “ward.” The affairs of the ward were administered by a local magistrate who represented it in the “lower house” of the clan’s governing council. Each group of wards comprised a “district” that was governed by an *induna*, or district headman. The *indunas* represented their districts in the “upper house” of the clan council. The highest authority was the clan chief who was usually a member of the royal house—the family that was in the direct line of descent from the founder of the clan. The chief, with his specially appointed council ministers, was all-powerful, since he was both the governor and chief justice of the clan. A kraal headman who had a serious grievance—usually on a matter of grazing rights or cattle thieving—could appeal directly to the chief if he considered that he had not received justice from his ward or district magistrate.

Thus, the Zulu clan was divided into small, self-contained, apparently inward-looking units. But in practice and in law it was a highly coherent and disciplined organization based upon units of ascending size and power. Cohesion and discipline were similarly apparent within each kraal. All power, as we have seen, resided in the headman. But each individual in the kraal could expect total obedience and respect from those below him in the rigidly defined social scale. The more-favored wives, for instance, had power over the less-favored. Older children had authority over their younger brothers and sisters. Paradoxically, perhaps, this well-defined system of authority bred into almost every Zulu a sense of responsibility for and generosity toward those below, or less fortunate than, himself.

The Rise and Fall of the Zulu Empire

The social organization of most other Nguni clans in Natal was similar to that of the Zulus. The cohesion and respect for leadership in such clans offered enormous scope to a chief who had both the ambition and the power to unite them into one nation. Such a man was Dingiswayo, son of the chief of the Mtetwa, who were neighbors of the Zulus. He and his brother rebelled against their father. The brother was killed but Dingiswayo fled from his homeland and escaped. He wandered far and wide, making a name for himself as a warrior with a Swazi tribe, and later meeting European travelers in Natal and also, possibly, near the Cape of Good Hope. When his father died in 1809, Dingiswayo returned home and assumed leadership of his people.

From what we know of him, Dingiswayo emerges as a

strong but wise ruler. Immediately upon becoming chief of the Mtetwa he began to plan ways and means of uniting all the Nguni clans of Natal into a single political system. Undoubtedly personal ambition spurred him on, but it may also have been that Dingiswayo could foresee the necessity for unification. The need was certainly there. The prosperity of the Nguni had led to a steady rise in their population and in the size of their cattle herds. As all the tribes needed large areas of veld on which to graze their cattle, there was a natural tendency for many of the tribes to move ever deeper into unoccupied land in southern Natal. In the late eighteenth and early nineteenth centuries, however, this slow migratory process began to be threatened by the advance of the Europeans of mainly Dutch stock who were advancing northeastward from the area around the Cape of Good Hope. These Boers, as they were called, were cattle farmers and thus were seeking exactly the same kind of land as the Nguni.

Among most Nguni peoples the land was commonly owned. There were no private estates, no land speculators, no fences, and no rents. If a man wished to leave his family kraal and establish his own he applied to the ward headman (or district headman if he wished to settle beyond his own ward), who would direct him to an available stretch of land. Thereafter the newcomer would make informal arrangements regarding pasture and arable rights with his neighbors in adjacent kraals.

The European cattle farmers posed a threat to this system of communal land tenure. Some of them acquired land from the Bantu or Hottentots in the Cape Colony by purchase or other friendly means. Others rejected the idea that the native peoples had rights to the land and simply took it from them by force of arms. Either way, however, the coming of the Europeans brought with it a contraction of the vast areas of land available to the Bantu farmers. Dingiswayo realized this. He had had friendly dealings with Europeans on his travels. But he knew that, sooner or later, the north-eastward march of the European farmers would bring them into his country. Unless his people were powerful enough to resist them, the Nguni pastures would be taken over.

Dingiswayo's first step was to strengthen the Mtetwa army. He reorganized it into age-group regiments, which soon became superior to those of any of the neighboring peoples. Within a few years Dingiswayo had gained sovereignty, by war or by peaceful persuasion, over all the Nguni (including the Zulus) between the Black Umfolozi and Tugela rivers in northeast Natal.



A portrait of King Shaka, aged about thirty-eight. He wears a crane's feather in his leather headstrap, a monkey-skin kilt, and armlets of white oxtails. He holds the broad-bladed stabbing spear and large shield, both of which he developed, thereby ensuring Zulu supremacy.



Shaka also developed a new battle formation (above). Four groups of warriors, lined up shield to shield, advanced on the enemy. The central group attacked while the flanks encircled. The reserves (pink) waited behind, their backs to the battle. Right: Utimuni, nephew of Shaka, in full battle array.



King Panda (foreground, right of center) is here seen reviewing two of his regiments, the Black and the White Shields. The king called out warriors to perform athletic feats.

A young member of one of Dingiswayo's crack Mketwa regiments was a Zulu of royal blood called Shaka. By 1810, when Dingiswayo's campaign of unification was gaining momentum, Shaka (then about twenty-three years old) had established a reputation as a warrior of exceptional courage and skill. According to Zulu legend it was Shaka who revolutionized the Nguni technique of fighting. Traditionally, opposing warriors would stand off from one another at a distance of about thirty paces and hurl their slender assegais at each other, defending themselves with their tough oxhide shields. Shaka was convinced that this was both a wasteful and indecisive method of fighting. He designed a shorter, heavier assegai with a broader iron blade. This weapon was ideal for close, man-to-man fighting. The skilled warrior, parrying the enemy's spears with his shield, could advance upon his opponent, hook his shield aside with his own, and stab him to death.

Encouraged by Dingiswayo, Shaka rose rapidly in power and influence, first taking command of his regiment and then (in 1816) succeeding to the chieftainship of the Zulus. Finally he took over Dingiswayo's position on the latter's death in 1818. Many of the worst atrocities of the Nguni tribal wars of the 1820s have been wrongly attributed to Shaka. It is true, however, that he possessed none of Dingiswayo's enlightenment and desire for peace. He was essentially a warrior-dictator and one, moreover, with a truly Napoleonic genius for the arts of war. He enormously enlarged Dingiswayo's army. He established special military



kraals throughout his kingdom in which his soldiers were trained to the highest pitch of mental and physical discipline. He organized vast military maneuvers in which he taught his commanders the secrets of tactics—how to use the shape of the land to best advantage, how to deceive the enemy with decoys, and so on. One of his most famous victories was against the much more powerful Ndwandwe tribes to the north. He won by luring the enemy into a vast area of land that had been stripped of cattle and other food. After standing off from the Ndwandwe for several days, Shaka defeated their hunger-weakened forces in several brilliant engagements.

In a series of campaigns during the 1820s Shaka routed all his neighboring rivals from the Pongola River in the north almost to Port Natal (on the site of modern Durban) in the south. Most of the conquered peoples became subject tribes of the Zulu nation. They were given land for grazing—sometimes retaining part or all of their original pastures—and their men were recruited into Shaka's army. By 1825 this army numbered over fifty thousand. Surrounding the Zulu empire was a vast no-man's-land, deserted by tribes fleeing before Shaka's army, and used as pasture for Zulu cattle. Shaka took over this territory and eventually controlled an area extending some two hundred and fifty miles westward from the Indian Ocean and stretching from Inhambane (Mozambique) in the north to the Umzimkulu River (on the Natal-Cape Province border) in the south.

But Zulu influence spread far beyond these boundaries. The great chief Mzilikazi, once one of Shaka's commanders, led his Ndebele (commonly called Matebele) warriors north-westward over the Drakensberg Mountains and forged a huge empire in Southern Rhodesia and northeast Bechuanaland. His royal kraal was on the site of the present city of Bulawayo, the Zulu word for "killing ground." Another of Shaka's breakaway chiefs, Soshangane, led his people northward and founded a kingdom that extended from the Zulu border in the south to the mouth of the Zambezi River in the north. A third, Zwangendaba, cut a narrow swathe of destruction between the Limpopo and Zambezi rivers, pressed on northward, and ultimately founded more than a dozen Nguni kingdoms around lakes Nyasa, Tanganyika, and Victoria. Mshweshwe (Moshesh), an ally of Shaka and chief of a Basuto tribe, gathered other, related tribes around him and forged the powerful Basuto nation.

In 1828 Shaka was murdered by his half brothers, Dingane and Mhlangana. Dingane, who succeeded him, proved

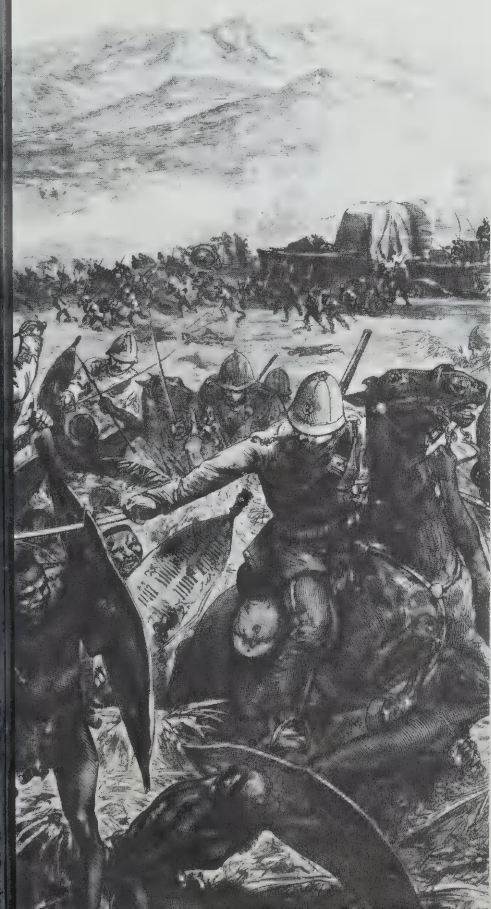


This photograph, taken at the end of the nineteenth century, shows Boer farmers with their ox-drawn trek wagons assembling at Robertson, near Pretoria, in the Transvaal.





Below: A scene from the Zulu war of 1879. In this five-month campaign, the British defeated Cetewayo, and put an end to Zulu supremacy in the Transvaal.



just as ruthless but less able as a ruler of the empire that he inherited. By 1830 the whole of Africa south of the Zambezi River was in ferment. The northeastern half of this region was dominated by the Zulus or their enemies. From the south came the growing tide of Boers, who were pushing before them Bantu and Hottentot refugees who had been driven off their lands. At the Cape itself, control—held since 1652 by the Dutch East India Company—had passed in 1815 into the hands of the British Government.

From 1836 onward the Great Trek of the Boers steadily increased the number of migrants seeking a new life beyond the borders of Cape Colony. More and more of their wagons rumbled northeastward over the Drakensberg Mountains and into the lush cattle country beyond. The contest for pasture between Boers and Zulus intensified and led to violent, although at first purely local, skirmishes. Dingane had promised peace to the earliest arrivals on the Great Trek. But the Zulus could not be expected to tolerate the permanent occupation of their land by the swelling tide of pioneers. In 1837 Dingane murdered Piet Retief and a party of Boers who had come to his royal kraal to negotiate grazing rights. For the next year, the Zulus successfully repulsed the Boers' attempts to push into their lands. Then, in 1839, the Boer leader Andries Pretorius (after whom the city of Pretoria is named), with his well-armed commandos mounted on horses, defeated Dingane. Pretorius was helped by Dingane's rebellious brother Mpande, who now succeeded to the Zulu throne.

Four years later the British seized control of Natal and signed a peace treaty with Mpande, who ceded them the country between the upper Tugela and Buffalo rivers. Mpande's son, the able Cetewayo, took over the leadership of the Zulus in 1856. By that time, the British and Boer farmers (both competing for territory) were too numerous and too well armed to be checked for long by the Zulu warriors, few of whom had guns. The western lands of the Zulu empire touched the Boer republic of Transvaal and there were constant disputes and skirmishes on the border. When Britain annexed the Transvaal in 1877 the disputes continued, and the following year the British sent an ultimatum to Cetewayo. Its terms guaranteed the existing frontier between Zululand and Transvaal, but demanded Zulu compensation for numerous frontier incidents. More important, it insisted that the Zulu regiments be disbanded. Cetewayo did not reply to the ultimatum and in January 1879 a British force of five thousand European and eight



thousand native soldiers, supported by field guns, invaded Zululand. After a five-month campaign Cetewayo's army of forty thousand was defeated. This campaign effectively sealed the fate of the Zulu empire.

Zulu Prospects

As a result of their long and bloody campaign against the Europeans, the Zulus had shrunk greatly in numbers. Much of their cultivated land was laid waste. Their cattle had been slaughtered or expropriated by the thousand (and many more succumbed at the beginning of the present century to rinderpest and other diseases). Their grazing land was greatly diminished to an area of some ten thousand square miles—about an eighth the size of Shaka's empire. Not all of it was devoted exclusively to Zulu settlement. Since 1910, when South Africa was granted dominion status within the British Commonwealth, Zululand has been administered as an integral part of Natal province.

Although the Zulus were permitted to continue as cattle farmers, the martial character of their social organization was gone forever. This was to have important effects on the life of the people. Under Shaka and his successors most of the day-to-day work in and around the kraals was done by

At puberty, girls are initiated into adult membership of the tribe. They perform a "python dance" around the ceremonial fire, to the rhythm of a drum beaten by a woman. The dance is under the supervision of a "mistress of ceremonies" (center).

Opposite page, top: A Zulu girls' dance. Dressed in their finest skirts, with bead collars, waistbands, and armlets, the girls sway together in a long line.

Zulu matrons perform an "umbrella dance," showing how tradition adapts to modern circumstances.



Zulu women. Almost all the adult male population were engaged in military service. This division of labor has persisted. After a Zulu youngster has completed his apprenticeship as a herdboy and has attained adult status by undergoing initiation tests, there is very little productive work for him to do in the reserve. The result is that many Zulus have sought work elsewhere. Some, preferring an outdoor life, work on the fruit farms and coffee plantations of the Europeans. But thousands of others have drifted into the cities, where a variety of nonskilled work is available to them. Many, for instance, work in the gold fields of the Transvaal.

The problems facing the Zulus today are those facing the Bantu peoples all over South Africa. The black population outnumbers the white by about four to one. Fearing domination by the Africans, the Europeans have denied the Bantu the right to elect their own people into Parliament. They have also restricted the social freedom of the Bantu by enacting pass laws, enforcing segregation in urban areas, and preventing the Bantu from rising above semiskilled levels in industry.

Soon after World War II, the Afrikaners, mainly descendants of the Dutch settlers, declared *apartheid* as the policy of the South African Government. To them apartheid means

separate cultural and political development of Europeans and Bantu. The plan is to create a number of Bantu "nations," each populated by a specific tribe or group of related tribes—Zulu, Xhosa, Sotho, and so on. It is intended to encourage these "Bantustans" to develop along traditional tribal lines, and new schools and colleges are to be built within each nation. Vast and rapid economic development will have to take place if these Bantustans are to become self-supporting. This is to be implemented by a Bantu development corporation.

The arguments in support of apartheid come down to a few basic ideas. The European South Africans as a whole, but especially the Afrikaners, have always insisted on the importance of maintaining the racial "purity" of the white citizens. (Although it should be noted that there are about a million half-caste people in South Africa, mainly in Cape Province.) The Afrikaners stress that whites have been in South Africa for more than three centuries—just as long as many of the Bantu. They feel that they should be allowed to develop the specifically European civilization that they have struggled for so long to build. They believe that alternatives to apartheid, such as some kind of racial partnership or full integration, would mean eventual domination, culturally and politically by the Bantu. Apartheid, they argue, enables both Europeans and Bantu to develop their capacities to the fullest extent.

The opponents of apartheid argue on both moral and practical grounds. They point out that, although the Bantustans will be ruled by tribal leaders, the South African Government has explicitly reserved the right to depose any chief or headman and to veto the appointment of his successor. There is, significantly, no suggestion that government control over Bantustan affairs is merely temporary. Although the Bantu may gradually increase their power within their own territories it has never been the intention of the government to surrender the Europeans' ultimate sovereignty. While the new Bantu colleges have the declared aim of enabling the Bantu to develop along their chosen cultural path, the government retains the sole right to select both teachers and syllabuses. The development corporation, which will be responsible for determining the scale and direction of economic growth in the Bantustans, will be controlled by the government and all its directors are to be Europeans. Finally, although Africans outnumber the whites by four to one, the combined area of the Bantustans amounts to less than one-eighth of South Africa's total land area, and much of it is impoverished.



A rehousing scheme (above) for Africans in Johannesburg. Identical brick and corrugated-iron houses provide homes with electricity and a sewage system. Less fortunate are the Africans who are drawn into towns by the lure of high wages. They must live temporarily in shanty towns (below) until they are rehoused.



Since World War II there has been a large and ever-growing movement of Bantu manual laborers into the large cities such as Johannesburg, Durban, and Cape Town. Between 1951 and 1957, for instance, the urban African population increased by more than forty per cent. Today there are well over four million Bantu city dwellers, most of whom are out of touch with the old tribal ways of life. They form a substantial minority of the total black population. More important, it is precisely these city dwellers who are the most politically conscious and who have organized and led the stubborn Bantu resistance to continued European domination. The policy of apartheid envisages the return of many urban Bantu to the reserves. But the country's economy has been founded—and will continue to depend for the foreseeable future—on a massive force of nonskilled Bantu industrial labor.

Originally, as we have seen, young Zulus (and others) came into the cities temporarily to earn a living wage. Today, many are second- or third-generation city dwellers. They are not only “detribalized” (a process hastened by many of them marrying people from outside their own tribes). They are firmly committed to the ways of European industrial society. And, having contributed a substantial share to the growth of that society, they are demanding with growing impatience a right to participate in its political direction and its wealth.

It is common to assume that most politically aware Bantu are simply antiwhite. Many of them undoubtedly are. But more significant is the fact that, while they are opposed to European domination, they have embraced European social attitudes to the point of rejecting tribal culture and the social and economic poverty of life in the reserves. The late Albert Luthuli was an ex-chief of the Zulus and one of the political leaders of the urban Bantu. He once pointed out that many black city dwellers have more in common with urban Europeans than with their own people back in the Kraals.

If history is any guide, detribalization is a process that cannot be reversed, even if the will is there. Judged by the rate of migration from reserve to city, the will no longer exists—if it ever did. The political leaders of the Bantu want to replace apartheid with the concept of a multiracialism. This envisions a society that owes no loyalties to color or race, and is founded not on the basis of tribal life but on that of industrial democracy. The two philosophies are utterly opposed. Many people fear that a decisive confrontation between the two sides is inevitable and that it cannot fail to be violent.



Conflict between underprivileged Africans and the authorities often erupts into violent action. Above: “Detribalized” urban workers burn their passbooks in protest against restrictions on their freedom to come and go. Below: Police arrest a demonstrator during a strike.





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Occasionally, European explorers were not bent merely on conquest. They sometimes studied and described the life of the peoples they discovered. Here an early artist has taken pains to show how orderly the life in a North American Indian village was at the end of the sixteenth century.

8 TRIBAL CULTURES AND MODERN LIFE

A barefoot man paces a small jungle clearing, prodding the earth with a digging stick, and dropping corn seeds into the holes. What has he to do with the man who farms many square miles of land with the help of complicated machines? A tribe may number only a few thousand people and be governed by a handful of elders. What has it to do with a great industrial nation where any one of a hundred factories in any one of a hundred towns demands a far more elaborate system of government?

The connections are in fact extremely close. The man with the digging stick and the man with the fleet of combine harvesters are both engaged in the same fundamental job of getting food. The one does it more efficiently than the other simply because he has better tools. The small tribe can be governed well by a few elders because nearly all its members are engaged in the single task of food-getting. But the great industrial nation demands a complex structure of government because efficient machines have released most of its people from the food quest. They are then free to pursue a bewildering variety of specialized work.

The study of primitive societies makes it clear that material culture and social organization develop side by side. The simplest societies are those in which techniques are so rudimentary that people are obliged to fit their way of life to the opportunities nature offers them. These are the societies that live by hunting, fishing, and food-gathering, like the Arunta Aborigines of Australia and the Yamanas of Tierra del Fuego. A higher stage of material culture is reached when people begin to understand how to work with nature, by domesticating animals or by improving strains of wild grasses and using them as crop plants.

These two developments may occur almost simultaneously, and they are often closely related to improvements in toolmaking. Before the ancestors of the Polynesians moved



In some cases, explorers stumbled upon the ruins of extinct cultures. The temples of the ancient Mayas proved to them that a civilization as complex as any in the New World once flourished in Yucatán.



Anthropologists today can still study customs that are rooted in tribal traditions. Above: A Bini chief works on the wax figure of an Oba. Below: A chief bronze-smith pours molten metal into a mold.



from southeast Asia into the Pacific, for instance, they had already discovered how to make better tools by grinding and polishing stones instead of chipping and flaking them. With better tools they could build bigger boats that enabled them to make longer voyages. They could also clear patches of forest, dig the land, and raise crops more easily. At about the same time they began to domesticate pigs and chickens. All these advances added up to an economic break-through from Paleolithic to Neolithic culture.

Once this break-through was made, changes in social structure followed inevitably. Settlements became bigger and more permanent. With food production made easier, some human energy was released for other things. New crafts sprang up, each setting its own problems of regulation. At the same time a few people, supported by the food surpluses produced by others, were freed to devote themselves to the increasingly necessary art of government. These were the chiefs and priests, who maintained order and harmony among societies numbering several thousand people.

In Benin, with its more advanced technology, bigger population, and wider trade contacts, the division of labor and the resultant stratification of society went much further. There the business of organizing trade and harmonizing the interests of different crafts called not only for the work of a king and a large body of court officials but also for the efforts of numerous craft guilds.

Modern industrial societies have gone many stages beyond this. Tools and machinery have become more efficient and new sources of energy are found to operate them. As a result, the proportion of people engaged in the basic work of food production gets smaller and smaller. In the United States, for example, only one-sixth of the population is engaged in agriculture. The rest pursue thousands of different occupations, each calling for specialized skills and each involving different interests. When civilization reaches this stage of complexity, an ever-growing number of people becomes engaged in regulating and coordinating human activities. A single trade union or a single harbor authority may need a more complicated form of government than any we have met in this book.

An anthropologist cannot hope to make comprehensive studies of complex industrial societies like this. His method of understanding a culture is to learn about it in all its aspects. Often he does this, with cultures that are still surviving, by living among the people. Such a technique is suitable for a tribe consisting of a few hundred or even a few thousand members, but not for a nation of many millions.



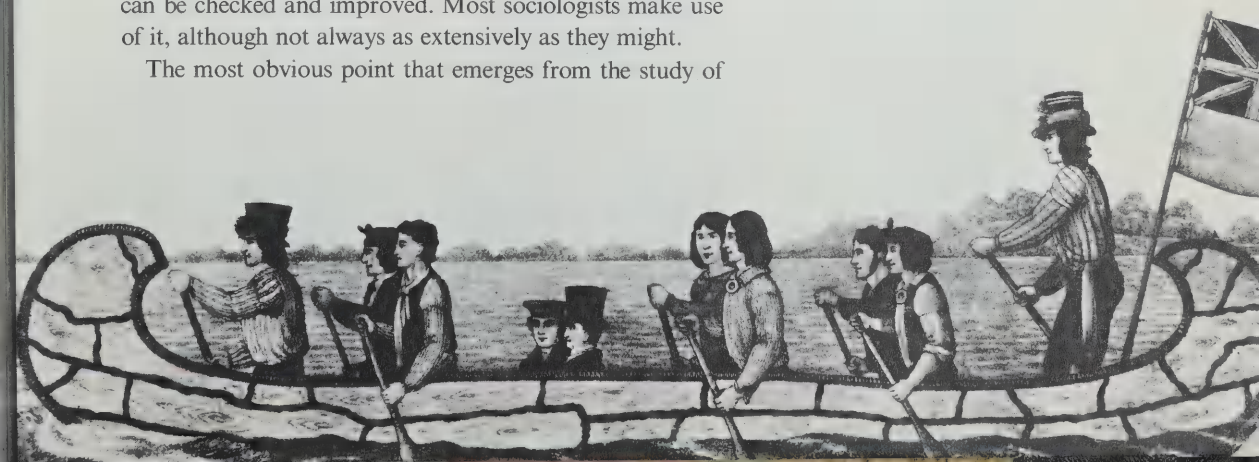
Furthermore, since specialization has gone so far in modern nations, there are many different classes of people with quite distinct ways of life. There is no longer one homogeneous culture that everyone shares and understands. The people who do study large societies—sociologists, political scientists, and economists—have to focus their attention on certain limited aspects of the society, or on small groups within it.

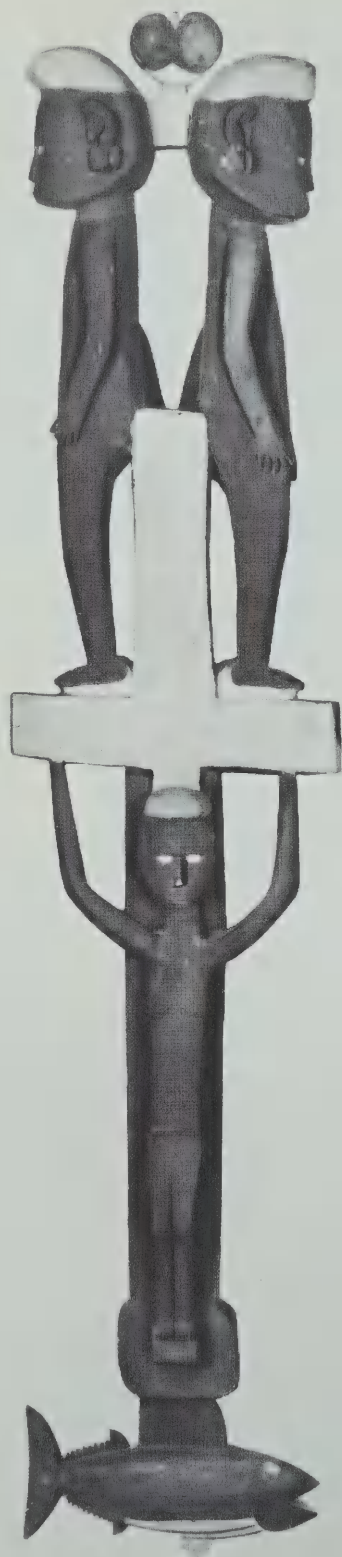
Anthropologists can seldom use their familiar methods to study the cultures of modern societies. But their own work on primitive people may be of great value for the sociologists who do. Sociologists cannot usually experiment like natural scientists. People cannot be manipulated at the scientist's pleasure. Theories about cultural behavior can be tested only by comparing the cultures of known groups. The information that has been gathered about a great number of primitive peoples, both surviving and extinct, thus serves as a kind of laboratory for the systematic analysis of human society. The comparison of many cultures is, indeed, a very important technique by which general theories about society can be checked and improved. Most sociologists make use of it, although not always as extensively as they might.

The most obvious point that emerges from the study of

The most far-reaching effects of European contact were a direct result of their super-weapon, the gun. In their own hands it gave them supremacy. In the hands of tribesmen (who obtained it by trade) it led to deadlier intertribal wars than had previously been known. Above: Mandans, with guns, attack a less well-armed neighboring tribe.

Having established their supremacy, Europeans imposed their way of life through government and trade. Below: A British Governor, with top hat, tours his district—the Red River, Hudson Bay—in a birchbark canoe paddled by Indians.





primitive peoples is perhaps also the most vital one. Membership in society provides one of the ways that individuals gain interests and incentives beyond the mere biological urge to survival. Through society a person may gain concepts of what is good and right, and hence a sense of purpose in life. If his standard of values is undermined, his sense of purpose may crumble with it. In Australia, for instance, the Aborigines found their old ways discredited by traders and missionaries, but could not easily find new aims that seemed to them meaningful. They lost heart to such an extent that tribes broke up, the birth rate dropped, and some groups died out altogether. Similar tragedies occurred all over the world. They have been checked in recent years only because people of European stock have gradually become more tolerant. They have allowed tribes who are reluctant to adopt Western values to keep their own.

But what of ourselves? The modern societies in which we live differ from their predecessors in that the need for change is actually built into them. We do not think of ourselves as belonging to a rigid social order established in the distant past by divine ancestors and proceeding unaltered into the future. The pace of technological development leads us to expect change, and indeed hope for it. As a result, the governments of modern nations are as much concerned with directing and promoting progress as with preserving the continuity of traditions. New production techniques are constantly calling for new patterns of industrial relations. The enormous extensions of human skills and knowledge demand new ways of teaching and learning. Better communications, pulling all corners of the earth ever closer together, cry out for greater international understanding and cooperation.

Such problems are a challenge to the scientific study of society. By analyzing the principles that underlie mankind's attempts to order this social life, we may be able to foresee how to adapt our society more rationally to new demands. In the search for understanding, we can still learn much from the study of primitive peoples.

Christian missionaries were often the first white men to visit tribal peoples, and many of them were killed. Where they established themselves, they changed the religious ideas of these peoples to a greater or lesser extent. The result—a mixture of old and new—is seen, for example, in the Solomon Islands crucifix at left.

Index

Numbers in *italics* refer to illustrations and captions to illustrations

Adornments (*see also* costume, ear-piercing, ornaments, tattooing): Arunta, 20–21, 24, 26, 28–29; Bushongo, 205–6; Easter Islanders, 145, 147; Haidas, 167, 169, 172, 172; Hopi, 31; Kenyahs, 97, 104, 104, 106; Maoris, 159; Masai, 61, 62, 63, 63, 65; Mayas, 110; Samoyeds, 60; Solomon Islanders, 123, 126, 127, 128; Tehuelches, 47; Wai-Wais, 89, 88, 89, 91, 96; Yamanas, 162–63, 166

Adz: Bushongo, 205; Haidas, 169, Tahitian, 14, 137

Afrikaners, 240

Agriculture (*see also* crops): Bini, 212, 218; Bushongo, 199, 199, 200, 203; Hopi—dry farming, 31–32, 42, 67; Iroquois, 192, 193; Kenyahs, 98, 101, 102; Mandans, 67, 70; Maoris, 158; Maroons, 221, 226, 226; Mayas, 113, 114, 116, 119; Solomon Islanders, 125, 129, 132; Wai-Wais, 90; Zulus, 230

Alacaluf tribe: canoe-building, 165; neighbor of Yamanas, 161, 163, 165

Alcoholic drinks: Bushongo, 203; Mayas, 116

Algonquin tribe, neighbor of Iroquois, 190

Anancy stories of Jamaica, 227

Anansi Spider stories of the Ashanti, 227

Animals, domestic: Bushongo, 203; Easter Islanders, 148; Maroons, 226; Masai, 61, 61, 62, 63, 64; Mayas, 113, 114–16; Polynesians, 133, 134, 142, 143; Solomon Islanders, 125, 129, 132; Tehuelches, 48, 49, 51, 52; Tuareg, 43, 43; Wai-Wais, 90, 91, 94; Zulus, 230, 230, 233, 236, 238

Apartheid, 239–41

Arabs, 43–44, 200, 212

Arawak Indians, early inhabitants of Jamaica, 221–22, 223

Arctic Circle, 47, 53–60, 177–87, 187; climate, 177–78; vegetation, 178

Arizona: desert, 31, 31, 32, 42; Indians of, 31–42

Arunta Aborigines of Australia, 14, 19–30, 32, 35

Ashanti tribe from Ghana: descendants dominate Maroons, 224–25; slaves in Jamaica, 223

Astronomy of Mayas, 110, 110

Aztecs of central Mexico, 31, 120

Bambala tribe, ruling tribe of the Bushongo, 199–201, 205, 208

Bambuti of the Congo, 81–86, 89, 109

Bantu: of the Congo, 84, 84–86; of South Africa, 229, 232–41

Basuto tribe, formation of, 236

Belgian colonization of Congo, (1885–1960), 86, 208

Benin City, 209–19, 210, 215

Berbers, 43

Bini of Benin, 209–19

Boas, Franz, anthropologist, 17

Boats: Copper Eskimos, 183, 184, 184, 185, 185, 186; Easter Islanders, 148, 148; Haidas, 168, 168, 169, 169, 170, 172; Iroquois, 192, 192; Kenyahs, 101; Maoris, 153; Tahitians, 133, 134, 136, 137, 136–37, 138–39, 140, 140; Samoyeds, 58; Solomon Islanders, 126, 127, 127, 128, 129; Yamanas, 161, 163, 164, 165, 165

Boatbuilding: Easter Islanders, 149, 149; Haidas, 168–69; Kenyahs, 101; Maoris, 158; Tahitians, 137, 141; Solomon Islanders, 126–27; Wai-Wais, 95, 95; Yamanas, 165

Bison, 41, 74; hides for clothes, 68, 69, 76, 77; hunt, 70, 73–74; migration north, 70

Blowpipe, Kenyahs, 102–4, 103

Boers, 234, 237

Bolas, chief weapon of Tehuelches, 50, 50, 51

Boomerang, 21, 28–29, 29

Breadfruit, 140, 142, 143, 148, 158

Brer Nancy tales, 227, 227

Brer Rabbit tales, 227

British colonization: of Australia, 18; of Jamaica, 222; of Kenya, 66; of North America, 196, 198

British Guiana, 87–96, 87, 88, 89

British missionaries: catastrophe at Benin (1897), 209; in Tahiti, 144

Bull-roarers, 26, 27

Bushongo, 199–208, 214

Calendar of Mayas, 110, 110

Camels, breeding and loaning of, by Tuareg, 13, 43, 43

Caribou: antlers, use of, 182; for clothing, 182; decline of, 187; hunt for, 185, 185

Cassava: chief crop of Wai-Wais, 89, 90, 94; cultivation of, 90; poison of, 92; preparation of, 92, 96

Catholicism: imposed on Mayas by Spanish, 121, arrives in Tahiti, 144

Catlin, George, American explorer and painter, 16, 72

Cayuga tribe: member of Iroquois League, 189; join British in American Revolution, 196

Ceremonies (*see also* religion): celebration, Bambuti, 86, 86; Bushongo, 206, 207; Iroquois, 190, 193; Kenyahs, 97, 102; Tahitians, 140–41; Tehuelches, 49; Wai-Wais, 89; initiation, Arunta, 24–25, 26, 26, 27; Bini, 215; Bushongo, 208; Hopi, 38; Masai, 63; Zulus, 239

Champlain, Samuel de, French explorer, 188

Chichén Itzá ancient Maya town, 110, 111, 117, 121

Chiefs (*see also* social organization):

Bambuti, 84; Bini, 210, 211, 211, 212, 212, 214, 216, 219; Bushongo, 199, 199, 200, 200, 201, 204, 205; Copper Eskimos, 186; Easter Islanders, 145, 149, 150, 151; Haidas, 172, 172, 173, 176; Hopi, 35, 39; Iroquois, 190, 190; Kenyahs, 104, 105; Mandans, 17, 67, 70, 73, 75, 78; Maoris, 153, 157, 157; Maroons, 224–25; Masai, 61, 65; Mayas, 109, 110, 114, 117, 119, 121; Tahitians, 137, 141; Tehuelches, 47, 48, 49; Tuareg, 45; Yamanas, 166; Zulus, 229, 229, 230, 232, 233, 234, 234, 235, 236–37

Children: Arunta, 21, 20–21, 22, 25, 28; Bambuti, 82, 86; Bushongo, 201, 203, 204, 208; Copper Eskimos, 182, 182, 187; Haidas, 170, 172; Hopi, 32, 36, 37; Iroquois, 193, 195; Kenyahs, 102, 108; Maoris, 157, 158; Mayas, 111, 114; Solomon Islanders, 124; Tehuelches, 51–52, 51; Wai-Wais, 94, 94; Zulus, 229, 230, 233

Christianity: spread to Bini, 219; to Borneo, 108; to Easter Island, 152; to Jamaica, 226; to Solomons, 132; to Tahiti, 144; to Yucatán Peninsula, 120

Class structure: Arunta, 25; Bambuti, 84; Bini, 209, 211, 212, 214–15, 218; Bushongo, 200, 201, 201, 203, 204; Easter Islanders, 150; Haidas, 167, 169, 170, 172, 172, 173, 173, 174, 175; Hopi, 35, 37; Iroquois, 190; Kenyahs, 99; Maroons, 224–25; Mayas, 109, 109, 110, 114, 117, 119; Tahitians, 136; Tuareg, 44, 45; Zulus, 229–30, 232–33

Coconuts: food, 142; fiber, 137, 140, 142; shell used in tools, 126, 129, 148

Colorado: river, 31; state, 31, 79

Columbus, 177, 221

Communities (*see also* class structure, dwellings, social organization): Arunta, 20, 21; Bambuti, 80, 82, 84, 85, 86; Bini, 210, 211; Bushongo, 201, 202; Copper Eskimos, 178, 183, 186, 187; Haidas, 167, 168, 172, 173, 176; Hopi, 31–42, 31, 32, 33, 34; Iroquois, 190, 191, 191; Mandans, 68; Maoris, 12, 154, 155, 157; Maroons, 220, 221, 224, 225, 226, 228; Masai, 62, 66; Mayas, 16, 109, 110, 111, 115, 115, 116, 117, 119, 121; Tahitians, 134, 143; Solomon Islanders, 122, 124, 124, 127, 129; Tehuelches, 48, 49, 51; Wai-Wais, 90, 90, 91, 93; Zulus, 229, 230, 230, 232–33, 232, 233, 234

Congo Forest, 81–86, 87, 199, 199

Cook, Capt. James: in Easter Island, 151, 155, 158–59; observes Haidas, 167; visits New Zealand, 159; names Society Islands, 133; in Tahiti, 134, 135, 138–39, 142, 143

Cooking (*see also* food): Arunta,

- 22; Copper Eskimos, 179, 180; Iroquois, 188, 191, 193; Mandans, 68–70, 76, 79; Maoris, 158; Mayas, 116, 117; Polynesians, 141; Solomon Islanders, 124; Tehuelches, 51; Yamanas, 166; Zulus, 232
- Copper Eskimos of NW Canada, 14, 177–87
- Corroboree, 26–28, 26
- Costume (*see also* adornment): Bini, 213; Bushongo, 200, 202, 203, 206–7, 206, 208; Copper Eskimos, 179, 182, 183, 185; Haidas, 168, 172; Hopi, 32, 36–37, 38, 38, 39; Iroquois, 191, 195; Kenyahs, 104; Mandans, 68, 71, 74, 75, 76, 77, 76–78; Maoris, 155, 158, 158–59; Masai, 62, 64, 65; Mayas, 114, 116, 118–19; Tahitians, 134, 135, 140, 141, 142–43; Samoyeds, 54, 54, 60, 60; Tehuelches, 46, 48, 49, 49; Tuareg, 44; Wai-Wais, 89, 89; Yamanas, 162, 162, 166; Zulus, 232, 234, 239
- Cotton, 32, 35, 35, 38, 40, 104
- Crafts (*see also* metal, pottery and weaving): Arunta, 28, 29, 30; Bini, 211, 216; Bushongo, 200, 200, 201, 206–7, 206, 207, 208; Copper Eskimos, 182; Easter Islanders, 147, 147, 149, 151–52, 151; Haidas, 170, 174, 174, 175, 176; Hopi, 38–40; Iroquois, 192–93; Kenyahs, 100–1, 100–1, 103, 104, 106, 107; Mandans, 68, 76–78; Mayas, 112, 113, 117, 120; Maoris, 155, 156, 157, 157, 158; Tahitians, 136, 137, 141, 143; Solomon Islanders, 126, 127, 128, 128, 129, 130, 131; Tehuelches, 51
- Crops (*see also* agriculture): Bini, 212; Bushongo, 199, 200, 203; Easter Islanders, 148, 152; Hopi, 15, 31, 33, 35, 41; Iroquois, 192, 193; Kenyahs, 98, 101, 102, 105; Mandans, 67, 79; Maroons, 221, 226; Mayas, 109, 114; Zulus, 230
- Curare, poison used by Wai-Wais, 91–92, 96
- Dakota Indians, 67
- Decline of tribe: Arunta, 29–30; Bambuti, 86; Bini, 219; Bushongo, 200, 208; Easter Islanders, 152; Haidas, 176; Mandans, 79; Maoris, 159; Mayas, 120–21; Samoyeds, 60; Tehuelches, 52; Tuareg, 45; Wai-Wais, 88, 96; Yamanas, 166; Zulus, 238
- Deserts: life in, 19–45; Arizona, 31, 31, 32; Central Australian, 18, 19; New Mexico, 31, 31; Sahara, 43–45, 43, 211
- Digging stick: Arunta, 21, 22; Iroquois, 193; Wai-Wais, 93
- Dingane, leader of Zulus, 236, 237
- Dingiswayo, leader of Zulus, 233, 234, 235
- Discovery of tribe: Bambuti, 81; Bini, 209; Bushongo, 199; Copper Eskimos, 177; Hopi, 32; Mandans, 67; Maroons, 221; Solomon Islanders, 132; Wai-Wais, 88
- Disease: Arawaks, 222; Copper Eskimos, 177, 187; Haidas, 176; Hopi, 37; Kenyahs, 108; Mandans, 79; Masai, 66; Tehuelches, 52; Wai-Wais, 88, 96; Yamanas, 166
- Dorobbo, shield-makers for the Masai, 63
- Dutch colonization of North America, 196
- Dwellings: Arunta, 12, 22; Bambuti, 80, 82, 82, 84; Bini, 210, 211, 212; Bushongo, 201; Copper Eskimos, 178–79, 178, 179, 183; Easter Islanders, 147; Haidas, 168, 173–74; Hopi, 32, 33–35, 33, 34; Iroquois, 188, 191, 191; Kenyahs, 12, 12, 98, 98, 99; Mandans, 68, 68, 69, 78; Maoris, 12, 155, 156; Masai, 62; Tahitians, 143, 143; Samoyeds, 54, 55, 58, 59; Solomon Islanders, 124, 125; Tehuelches, 12, 48–49, 48–49; Tuareg, 44, 45; Wai-Wais, 90, 90, 91; Yamanas, 12, 12, 160, 163–64, 164; Zulus, 229, 230, 230, 232, 233, 240
- Dyaks, neighbors of Kenyahs, 97, 97
- Ear-piercing: Easter Islanders, 145, 147; Kenyahs, 97, 104; Masai, 61; Solomon Islanders, 123; Tehuelches, 51
- Easter Island (Rapa Nui), SE Pacific, 133, 145–52, 153
- Egyptian explorers, discover pygmies, 81
- Elgunoni: as blacksmiths, 62, 63; trade with Masai, 63
- Erie tribe, neighbor of Iroquois, 190, 196
- European colonization (*see also* under constituent countries): of Australia, 29–30; of Dakota, 67, 79; of Siberia, 60; of South Africa, 229, 234, 237, 241
- European missionaries: reach New Zealand, 159; reach Solomon Islands, 132
- European traders: to New Zealand, 159; to West Africa, 45
- False Face Society of the Iroquois, 195, 195
- Fire: Arunta, 22, 22; Bambuti, 80, 82, 83; Haidas, 169, 172, 174; Hopi, 37; Iroquois, 188, 191; Kenyahs, 99, 102; Mandans, 68; Mayas, 117; Tahitians, 137, 141; Solomon Islanders, 124; Tehuelches, 50; Wai-Wais, 90, 91; Yamanas, 161, 163, 164; Zulus, 230
- Fishing: Bushongo, 203; Copper Eskimos, 178, 180, 181–82; Easter Islanders, 149; Haidas, 167, 169, 170; Iroquois, 192; Kenyahs, 102; Maoris, 158; Mayas, 116; Polynesians, 134; Tahitians, 143–44; Samoyeds, 53, 54, 55, 56, 58, 60; Solomon Islanders, 122, 124, 125, 127, 128–29; Wai-Wais, 90, 92; Yamanas, 12, 163, 163, 164
- Food (*see also* cooking): Arunta, 19, 21, 22, 28; Bambuti, 82, 83, 83; Bini, 214; Bushongo, 199, 203; Copper Eskimos, 178, 180, 182, 184–86; Easter Islanders, 148–49, 150, 150; Haidas, 167, 168, 169, 170, 176; Hopi, 31, 38; Iroquois, 190, 191, 192, 193, 194; Kenyahs, 98, 102; Mandans, 67, 68–70, 74, 78–79; Maoris, 157, 158; Maroons, 223, 226; Masai, 61–62, 62; Mayas, 109, 114, 116, 117; Tahitians, 134, 140, 141, 142, 143; Samoyeds, 54, 58–60; Solomon Islanders, 122, 125, 125, 127; Tehuelches, 47, 49, 50; Wai-Wais, 89–90, 89, 92, 94; Yamanas, 162, 163, 163, 166; Zulus, 230, 232
- French colonization of North America, 196
- French missionaries, arrive in Tahiti, 144
- Gods (*see* religion)
- Gonzales, Captain Felipe, visits Easter Island, 146, 147, 148
- Gray, George, British explorer, 30
- Guanaco: description of, 47–48; hung as fuel, 49; as food, 47, 49, 50, 50, 162, 163; hide for clothing and shelter, 48, 50, 51, 162, 162; hunting of, 49, 51, 52; seasonal movements of, 49
- Guianas, 87–96
- Guinea States, 211, 219
- Haidas, of Queen Charlotte Island, 17, 167–76
- Harpoon, 181, 181, 184, 184, 185
- Head-hunting: Haidas, 172; Kenyahs, 15, 104–5, 105–8; Solomon Islanders, 127, 127
- Heyerdahl, Thor, his theories about the origins of Easter Islanders, 152
- Hiawatha, founder of Iroquois League, 189
- Hopi Indians of N Arizona, 15, 31–42, 67, 73, 172
- Horse, effect on life of: Mandans, 67, 74, 75, 78, 79; plains Indians, 42; Tehuelches, 46, 48–49, 52
- Hottentots, 234
- Hunting: Arunta, 19–22, 23, 29; Bambuti, 82, 82, 83, 83; Bushongo, 203; Copper Eskimos, 12, 180–81, 182, 184–85, 184, 185, 186, 186, 187; Haidas, 167, 169; Hopi, 33; Iroquois, 188, 193, 195; Kenyahs, 102; Mandans, 12, 67, 70, 73–74, 75, 79; Maroons, 223, 226; Mayas, 116, 116, 117; Samoyeds, 53, 54, 58, 60; Solomon Islanders, 125; Tehuelches, 47, 49, 49, 50, 50, 51, 52; Wai-Wais, 12, 90, 92; Yamanas, 161, 162, 163, 164, 165; Zulus, 232–33

- Huron tribe, neighbor of Iroquois, 190, 196
Huskies, 59, 180, 181, 182
- Incas, 120
Indian territory reservations, 42
Iroquois of North America, 189–98
- Jamaica, 143, 220, 221–28
- Kangaroo: as food, 22; as totem, 25, 27
Kayak, Eskimo canoe, 12, 183, 184, 184, 185, 185, 186
Kenyahs of Borneo, 15, 97–108, 128, 156
Kikuyu, their rivalry with Masai, 64, 66
Kraal, 229–30, 230, 232, 232, 233, 234, 235, 236, 237, 238–41
- Lafitau, missionary, describes Iroquois (1724), 192
Language: *spoken*, of Kenyahs, 97; of Polynesians, 134; of Solomon Islanders, 124; of Zulus, 232; *written*, of Easter Islanders, 149; of Iroquois, 190; of Mayas, 121
La Pérouse, French explorer, in Easter Island, 145
Le Bruyn, Cornelius, French explorer, 53, 55
Leisure (*see also* ceremonies, celebrations): Arunta, 28, 29; Copper Eskimos, 182, 183; Iroquois, 193, 194, 194, 195; Mandans, 68; Mayas, 114; Tahitians, 140–41, 144; Tehuelches, 51, 52, 52
- Magellan, Ferdinand, Portuguese explorer, discovers Tierra del Fuego (1529), 161
Mandans of N Dakota, 16, 67–79
Mantajo, Francisco de, attempts to conquer Mayas (1527), 120
Maoris of New Zealand, 153–59
Maroons of Jamaica, 221–28
Marriage: Bambuti, 84; Bini, 214; Haidas, 173; Hopi, 35; Masai, 65; Tehuelches, 48; Tuareg, 44; Wai-Wais, 96; Zulus, 230
Masai of Kenya, 61–66, 230
Mayas of Middle America, 109–21, 129
Melanesians, 123, 133
Mendaña, Spanish explorer, discovers Solomon Islands (1568), 132
Metal, use of: Bambuti, 84, 84; Bantu, 84, 84; Bini, 16, 209, 209, 210, 211, 211, 212, 212, 213, 214, 215, 216–18, 216, 217, 218, 219; Bushongo, 200, 204, 204; Copper Eskimos, 14, 179, 182, 182, 187; Elgunoni, 62, 63; Haidas, 175, 176; Kenyahs, 14, 100–1, 100; Masai, 62, 63; Mayas, 110; Samoyeds, 60; Tuareg, 45; Zulus, 232, 232, 235
Modern life: Arunta, 19; Bambuti, 82, 86; Bini, 209; Bushongo, 199; Copper Eskimos, 187; Easter Islanders, 152; Hopi, 31, 32, 33, 42; Iroquois, 195, 198, 198;
- Kenyahs, 108; Maoris, 159; Maroons, 224; Masai, 66; Mayas, 109, 120, 121; Tahitians, 144; Samoyeds, 60; Tuareg, 43; Wai-Wais, 87, 96; Yamanas, 161, 166; Zulus, 240, 242
- Mohawk tribe: member of Iroquois League, 189, 190, 191; join British in American Revolution, 196
Moslem religion: spreads in Borneo, 108; spreads to Tuareg, 44
Mtetwa tribe, 233, 234
- Namba Roy, modern Maroon artist, 227, 228
Natal, 229, 229, 233, 237
Navajo people, 41
Navigation: Easter Islanders, 145–46; Maoris, 153; Polynesians, 16, 134–36
Ndebele (Matebele) warriors form Zulu empire, 236
Ndwandwe tribe, 236
Neutral tribe, neighbor of Iroquois, 190, 196
Nordenskjöld, Baron, Swedish explorer, 54
- Oba, the, king of Benin, 210, 211, 211, 212, 214, 214, 215, 216, 219
Okipa ceremony of Mandans, 70, 72, 73, 73
Oneida tribe: member of Iroquois League, 189; join colonists in American Revolution, 196
Onondaga tribe, member of Iroquois League, 189, 190; join British in American Revolution, 196
- Origin of tribe, Arunta, 19; Bambala, 199; Bambuti, 81; Bini, 210; Bushongo, 199; Easter Islanders, 145, 152; Iroquois, 189; Kenyahs, 97; Mandans, 67; Maoris, 153; Maroons, 220, 221–23; Masai, 61; Mayas, 109, 112; Samoyeds, 53; Solomon Islanders, 123; Tehuelches, 47; Tuareg, 43; Zulus, 229
- Ornaments (*see also* adornments): Bini, 213, 216; Haidas, 175; Maoris, 158; Solomon Islanders, 124, 128; Tehuelches, 50; Wai-Wais, 96; Yamanas, 163
Ostyaks, of Siberia, 53
- Parry, Arctic explorer, 178, 185
Patagonia, 46, 47–52, 47, 48, 67
Physique: Arunta, 20; Bambuti, 81; Bantu, 84; Easter Islanders, 147, 152; Haidas, 167, 167; Hopi, 32; Kenyah, 97; Mandans, 67–68; Maoris, 153; Masai, 61, 61; Mayas, 109, 112; Polynesians, 133; Samoyeds, 54; Tehuelches, 48, 52; Tuareg, 44; Wai-Wais, 88; Yamanas, 162
Polynesia, 133–44, 145, 156, 157
Portuguese explorers, discover mouth of Congo, 199
- Potlatch, 173–75, 175, 176
Pottery: Bini, 215; Hopi, 32, 40–41, 41; Mayas, 109, 117–18; Solomon Islanders, 129; Zulus, 232
Pueblo culture, 31–42
Pump-drill of Solomon Islanders, 126, 126
Pygmies (*see* Bambuti)
- Queen Charlotte Islands, 167–76, 167
- Reindeer: as draft animals, 57, 57–58; as food, 57; as sacred animals, 56–57; as evidence of wealth, 57
Religion: *beliefs*, Arunta, 20, 24–25, 24–25, 29; Bambuti, 86; Bini, 214, 214, 217; Bushongo, 208; Copper Eskimos, 184, 186, 187; Easter Islanders, 149, 150, 150; Haidas, 170, 170, 171; Iroquois, 195; Kenyahs, 108; Maroons, 226, 227, 227, 228; Mayos, 114, 118; Polynesians, 136, 141; Samoyeds, 55–56; 56, 57, 58; Solomon Islanders, 127, 128, 129, 131; Tuareg, 44; Wai-Wais, 95; *ceremonies* (*see also* under ceremonies, initiations), Arunta, 24–25, 26–28, 26; Bambuti, 84; Bantu, 84; Bini, 209, 214, 217, 219; Copper Eskimos, 187; Easter Islanders, 150, 151; Haidas, 169, 170, 175; Hopi, 34, 35, 36, 37, 37, 38, 38, 39, 41; Iroquois, 190, 195; Kenyahs, 108; Mandans, 68, 71, 72, 73–74, 73; Mayas, 114, 120; Tahitians, 135, 137, 140, 142; Yamanas, 166; Zulus, 232, 238; *gods*, Arunta, 20, 24–25, 29; Bini, 210, 214; Bushongo, 201, 207–8; Copper Eskimos, 182, 186, 187; Easter Islanders, 150, 150; Haidas, 167, 170, 172, 173; Hopi, 36, 36, 37, 37, 38, 38, 39, 41; Iroquois, 195; Kenyahs, 104; Maoris, 157; Mayas, 114; Tahitians, 136, 136, 137, 140; Samoyeds, 55–56, 56, 57, 58; Solomon Islanders, 126, 127, 128, 129, 130, 131; *priests*, Copper Eskimos, 187; Easter Islanders, 149, 150–51, 150, 152; Hopi, 36, 37; Masai, 65, 66; Mayas, 109, 114, 114, 117, 118, 119–20; Samoyeds, 56, 56–57; Wai-Wais, 95
Religious societies: Hopi, 37; Iroquois, 195; Mandans, 71–73, 71; Tahitians, 141
Rice, its importance to Kenyahs, 98, 101, 102
Roggeveen, Jacob van, first European to visit Easter Island, 145, 146, 147, 148
Rongo-rongo writing, of Easter Islanders, 17, 149, 150
Russian colonization of Siberia, 53, 60
Russian fur traders: trade with Eskimos, 177; trade with Samoyeds, 60

- Sahara Desert, 43–45, 43, 211
 Samoyeds of Siberia, 53–60
 Schomburgk, Sir Robert, British explorer, describes the Wai-Wais, 87, 88
 Seal: blubber as fuel, 180; breathing, method in icy water, 181, 181;
 for clothing, 162, 180, 182, 184;
 origin of (myth), 187
 Seneca tribe: member of Iroquois League, 189, 191; join British in American Revolution, 196
 Shaman, Samoyed priest, 56–57
 Shaka, Zulu chief, 229, 234, 234, 235, 235, 236, 238
 Shamba Bolongongo, great king of the Bambala, 200, 200, 205
 Slave trade: of Easter Island, 152;
 of West Africa, 199, 200, 218–19
 Sledge: Eskimos, 12, 180, 182, 183, 184; Samoyeds, 57, 59
 Social organization (*see also* chiefs, class structure, communities):
 Arunta, 20, 25; Bambuti, 84, 86;
 Bini, 209, 211, 214–15; Bushongo, 200, 201, 202, 203, 204, 208;
 Copper Eskimos, 186; Haidas, 170, 173, 174, 175, 176; Hopi, 33, 35; Iroquois, 16, 189, 189, 190, 190, 193, 195, 198;
 Mandans, 67, 68, 71; Maoris, 154, 157; Maroons, 225, 226;
 Masai, 62, 63–65, 63, 66; Mayas, 109, 110, 116, 119, 121;
 Tahitians, 136, 137, 141;
 Samoyeds, 54, 55, 60; Solomon Islanders, 132; Tehuelches, 48, 49; Zulus, 229, 232–33, 234, 239
 Solomon Islanders, 123–32, 142
 Spanish colonization: of Arizona, 79; of Jamaica, 221–22; of Peru, 146; of South America, 52; of Yucatán, 120
 Spanish conquistadors: effect on Hopi, 32, 41–42; conquer Mayas, 109, 120
 Spanish missionaries, influence on Hopi, 42
 Stanley, his accounts of pygmies, 80, 81
 Strophanthus genus of plants, poison from 81, 83, 92, 102
 Susquehanna tribe, neighbor of Iroquois, 190, 196
 Sweet potatoes, 114, 148, 152, 158
 “Symbiosis” of Bambuti and Bantu, 84
 Tahiti, 133–34, 146, 148, 153, 156
 Tasman, Abel, discovers New Zealand (1642), 159
 Tattooing: Easter Islanders, 147
 Haidas, 172, 173; Kenyahs, 104, 107; Maoris, 153, 158–59, 159
 Tehuelches of Patagonia, 12, 47–52, 79
 Tierra del Fuego, “Land of Fire,” 160, 161–66, 161, 162
 Tobacco tribe, neighbor of Iroquois, 190, 196
 Toltecs of Mexico, 110, 111
 Totems: Arunta, 25, 28; Haidas, 17, 168, 169, 172, 172, 173, 174, 174, 175, 176
 Trade: Bambuti, 84, 84; Bantu, 84, 84; Bini, 211, 212, 214;
 Copper Eskimos, 177, 187;
 Haidas, 167, 176; Hopi, 31, 32, 41; Iroquois, 192, 193, 196;
 Mandans, 67; Maoris, 153;
 Maroons, 226, 226; Masai, 63;
 Mayas, 117, 119; Tahitians, 142; Tuareg, 43, 43, 45; Wai-Wais, 92, 94, 96; Zulus, 230
 Tuareg, of the Sahara, 43–45
 Tundra, 47–79, 184
 Tuscarora tribe: join Iroquois League, 196; join colonists in American Revolution, 196
 Utensils (*see also* weapons):
 Arunta, 14, 14, 19, 20, 22, 29;
 Bambuti, 84; Bini, 212, 215;
 Bushongo, 203, 204, 204, 205, 205, 207; Copper Eskimos, 14, 178, 179, 180, 182, 182, 184, 187;
 Haidas, 168, 169, 170, 175, 176;
 Hopi, 33, 40, 41, 41; Iroquois, 191, 193; Kenyahs, 99, 100, 101;
 Mandans, 76; Maoris, 157;
 Maroons, 226; Mayas, 110;
 Polynesians, 14, 14; Tahitians, 136, 137, 141, 143; Solomon Islanders, 124, 125, 126, 129;
 Tehuelches, 50, 50; Wai-Wais, 93, 94; Yamanas, 165; Zulus, 14, 230, 232
 Vikings: early settlers meet Eskimos, 177; navigation compared with that of Polynesians, 134–36
 Wai-Wais, of South America, 87–96, 98, 113
 “Walkabout” of the Arunta, 20–22, 20
 Wallis, British explorer, discovers Society Islands, 133, 144
 Wampum beads of the Iroquois: appearance, 193, 193; as currency, 198; manufacturer of, 192; for recording, 17, 190; keeper of the wampum, 190
 War (*see also* weapons): Bini, 218; Bushongo, 200; Easter Islanders, 145, 151; Haidas, 168, 172; Iroquois, 15, 188, 191, 195, 196; Kenyahs, 104, 104, 105; Mandans, 70–71; Maoris, 154, 155, 155, 156, 159; Maroons, 223, 224–25, 224, 225, 226; Masai, 15, 64–65; Mayas, 114, 120, 121; Polynesians, 134; Solomon Islanders, 124, 127, 127, 128, 132; Tehuelches, 49, 49; Tuareg, 43, 45; Yamanas, 164–65; Zulus, 229, 234, 235, 236, 237, 236–37, 238
 Weapons (*see also* war): Arunta, 21, 20, 22, 23, 24–25, 28; Bambuti, 81, 82, 83, 84; Bini, 216, 218; Bushongo, 199, 205, 206; Copper Eskimos, 180, 181, 181, 182, 184, 185, 186; Haidas, 169; Hopi, 33, 41; Iroquois, 191, 191, 194, 196; Kenyahs, 100, 100, 101, 102–4, 105, 106, 107, 108;
 Mandans, 68, 71, 74, 78, 78;
 Mayas, 121; Maoris, 153, 155–56, 159; Maroons, 224; Masai, 63, 64, 65, 65; Mayas, 110, 116, 117; Samoyeds, 54, 58, 58;
 Solomon Islanders, 124, 125, 127;
 Tehuelches, 49, 50, 51; Tuareg, 43; Wai-Wais, 90–91, 92, 94, 96;
 Yamanas, 162, 165; Zulus, 230, 232, 234, 235, 237
 Weaving: Bini, 216; Bambala, 200; Bushongo, 206; Haidas, 168; Hopi, 33, 38–40, 40; Kenyahs, 104; Mayas, 116, 118–19; Wai-Wais, 96; Yamanas, 165
 Whale: blubber as fuel, 180; bone, 164, 169, 180; as food, 168, 185–86; hunt for, 169–70; as depicted in myth, 184; as depicted in totem, 169, 173, 174
 Women: Arunta, 20, 21, 22, 24–25, 28; Bambuti, 82, 83, 86; Bini, 212, 215; Bushongo, 203, 206–7, 207; Copper Eskimos, 179, 182, 182, 186; Easter Islanders, 145; Haidas, 167, 167, 168, 169, 170, 172, 176, 176; Hopi, 32, 33, 35, 38, 40, 40, 41; Iroquois, 190, 192, 193, 195; Kenyahs, 97, 102, 102; Mandans, 68, 70, 73, 76, 76, 77, 79; Maoris, 155, 157, 158; Maroons, 223; Masai, 63, 65–66; Mayas, 114, 116, 117; Tahitians, 133, 134, 140, 141, 143; Solomon Islanders, 126, 128–29; Tehuelches, 46; Tuareg, 44, 44; Wai-Wais, 90, 92, 92, 96; Yamanas, 162, 162, 163, 164, 166; Zulus, 229, 230, 233, 238, 238, 239
 Yakuts of Siberia, 53
 Yamanas of Tierra del Fuego, 12, 161–66
 Yams, 148, 158, 203, 226
 Yoruba tribe, 210
 Yucatán Peninsula, 109–21, 109, 114, 121
 Yukagirs of Siberia, 53
 Zulus, of South Africa, 14, 229–41

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	(B) Drawing S. Parkinson, British		<i>Voyages de la Nouvelle France</i> ,	231	South Africa
	Museum		<i>etc.</i> , 1603	232-33	G. F. Angas, <i>Kaffirs Illustrated</i>
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	Darwin Museum		(T) National Museum of Canada	254	Solomon Island canoe figurehead,
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	1891	198	British Museum		
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